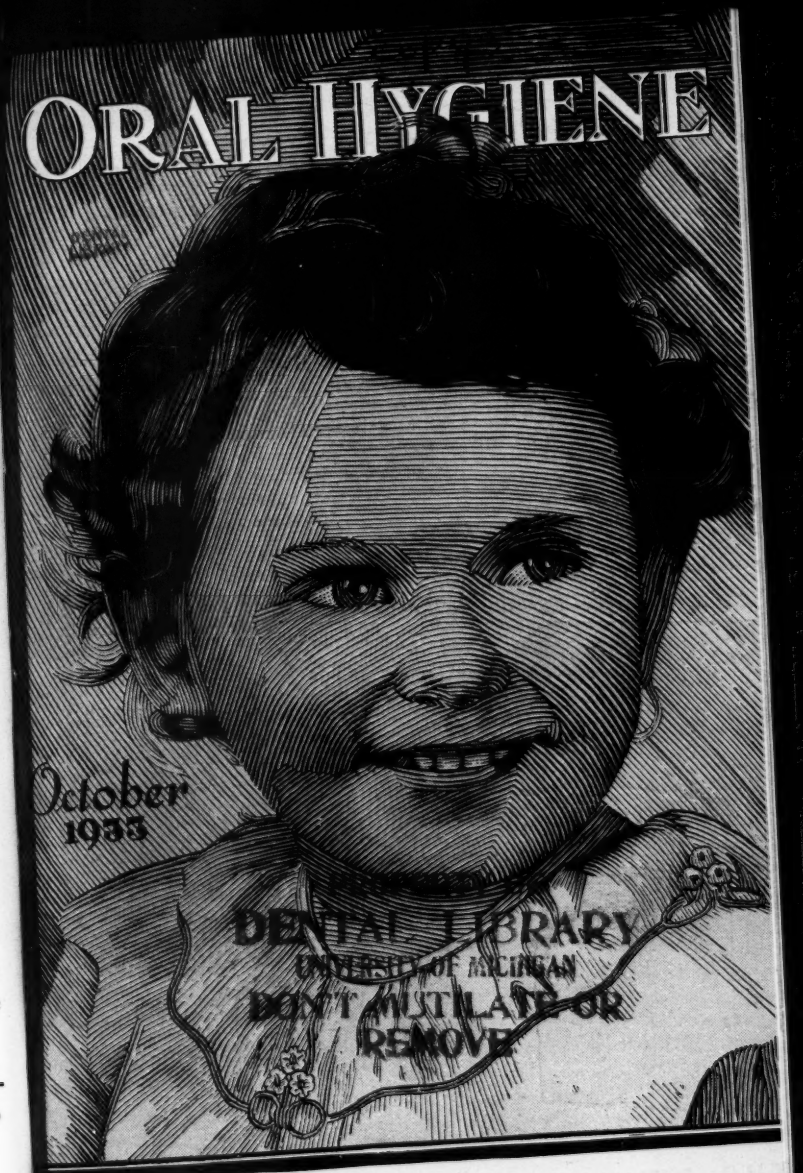

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Cooperate with your dentist in striving for clean gum-gripped teeth

ASK ABOUT **PYROZIDE TOOTH POWDER**

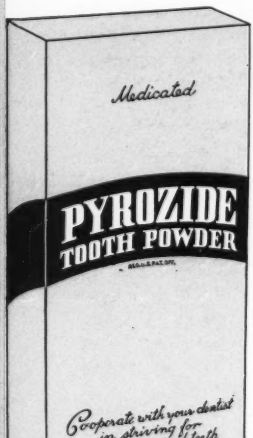
KNOWN TO DENTISTS EVERYWHERE

Only the DENTIST

is competent to determine the dentifrice requirements of the individual patients under his care. That is why we confine our public advertising to the very small ad as shown above.

Some dentists tell their patients to "use any good dentifrice" with the consequence that the patient is forced to guess what dentifrice is "good". Our clinical activities and research work, started twenty-five years ago, were financed by men prominent in the dental business and who were interested in cooperating with the profession in finding a method of treating Rigg's disease (now known as Pyorrhea) and preventing so great a loss of teeth as was then encountered due to lack of information on the subject. Professional men were engaged to devote their entire time to the study of the causes, effects, treatment and prevention of what they, for brevity, termed Pyorrhea.

Years of experience in our free clinics and the reports received from many thousands of dentists covering all civilized countries offer conclusive evidence that proper home cooperation on the part of the patient is a decidedly important factor in effecting tooth retention.



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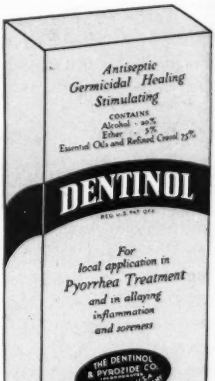

Sold by Dental Dealers

THE DENTINOL & PYROZIDE CO., INC.

480 Broadway, Sole Distributing Agent New York City

THE
Publisher's

No. 147

CORNER

By MASS

BACK in July, ORAL HYGIENE signed the President's blanket code, earning the Blue Eagle which first appeared on the cover of the September number. Later this paper joined the Periodical Publishers Institute when it was organized to administer the special NRA Code for magazines.

But there is no official code for colyumists—no recovery legislation for the big-time pillar-penners. And none for the teentsy-weentsy ones either. So there is no code for the CORNER which has always fought listlessly for the idea that we would all be better off if we spent more summer hours prone under trees—more time in winter weather trying (not too hard) to find pictures in the ever-changing rosy colors framed by the fireplace.

So, with no official code to legislate leisure, and being too tired to do anything about it, this department hails with delight the unofficial code for colyumists sponsored by George Carleton of *The Cleveland News*, who writes "The Town Pump" for that paper.

George has not yet got himself rested up enough actually to write a code, but he has at least managed to breed a bird for colyumists, and a cut of it will be found nestling cosily somewhere near these lines; the printer will have to figure out just where the cosy nestling is to take place.

Incidentally, in the true spirit of the Carleton Code—as exemplified by the cut—the CORNER is glad to devote the space the cut itself takes up. This means that, for a starter,

scissors and paste are filling a couple inches of this month's department, saving the writing of about two dozen words. Some more of the new legal leisure is won by using up a line for the three stars separating this paragraph from the next.

* * *

And scissoring and pasting lengthen the page a little more by passing on to CORNER-customers this clipping from the 100th Anniversary Issue of the New York *Sun*, published last month, giving a bit of dentistry's ancient history from the yellow files of that venerable daily:

"*The Sun* worked up some local excitement now and then to the extent of Editor Day's being threatened with beatings, Reporter Wisner's being challenged to a duel by a quack dentist—the writer, having the choice of weapons, chose syringes loaded with the dentist's fake medicine." Another full line, decorated with three more of those little stars, paves the way for further ready-made copy, with the requisite dental flavor, briefed from the Sunday paper.

* * *

Damon Runyan, in the "Mystery of the Deady Molars," tells how Dr. Heber Dabbadabba, a disguised gangster, lured to his dental chair Six-Fingered O'Connell, and made a denture for him. Operative T-99 then entered the picture, suspicious of the Doctor.

The detective said to the latter, "In your presence I wish Mr. O'Connell to click his teeth together as hard as possible." Dr. Dabbadabba leaped forward as pale as a ghost and stuck an index finger in O'Connell's open mouth. "No!" cried the doctor, "No, no!"

Operative T-99 pushed the Doctor's finger aside and "with a quick jerk removed the entire set from O'Connell's mouth and tossed it out an open window. The teeth fell six stories to the sidewalk and there was a tremendous explosion. They had been loaded with a high explosive! It was fortunate for O'Connell that he didn't bite on anything hard. Dr. Dabbadabba escaped and is now a fugitive from justice."

* * *

Damon Runyan's story has something of the flavor of Dr. Frank Dunn's September ORAL HYGIENE tale about Dr. Holliday, the two-gun dentist. This month Dr. Dunn hurries to the other end of dentistry's social scale and interviews Dr. Frank Casto, president-elect of the A.D.A., whom this department proudly numbers among its

customers. For the November issue, Dr. Dunn has written a piece about Zane Grey, D.D.S.

* * *

And, under the Carleton Colyumists' Code, stopping one page short of the usual four, the CORNER closes with the news that the red Corona, the scissors and the paste are being carted this week to spic-and-span new quarters at 1005 Liberty Avenue, Pittsburgh.

Dental Meeting Dates

Eastern Dental Society, next meeting, Allied Dental Council Headquarters, New York City, October 5-6. The program will include a lecture, round table discussions, and twenty clinics.

Tri-State Dental Clinic, 3-day postgraduate meeting, Hotel Peabody, Memphis, October 9-11. Ethical dentists from all Southern states are welcome.

American Society for the Advancement of General Anesthesia, next meeting, Fraternity Clubs Building, New York City, October 23. Dinner at 7 P. M. Make reservations with Dr. M. Hillel Feldman, 730 Fifth Avenue, New York City.

Maryland State Dental Association, 50th anniversary celebration, Lord Baltimore Hotel, Baltimore, October 30-31.

American Society of Orthodontists, annual meeting, scheduled for April 19-21, will be held in Oklahoma City, Oklahoma, November 8-10. All ethical practitioners of dentistry are invited. For program, write to Dr. Claude R. Wood, Secretary, Medical Arts Building, Knoxville, Tennessee.

Massachusetts Board of Dental Examiners, next examination for registration of dentists and hygienists, Boston, November 13-15. For further information, write Dr. W. Henry Grant, Secretary, Room 141, State House, Boston.

Odontological Society of Western Pennsylvania, 52nd annual meeting, William Penn Hotel, Pittsburgh, November 14-16.

First and Second District Dental Societies of the State of New York, 9th annual Greater New York December meeting, Hotel Pennsylvania, New York City, December 4-8.

Illinois State Dental Society, 70th annual meeting, Springfield, May 8-10, 1934.

ORAL HYGIENE

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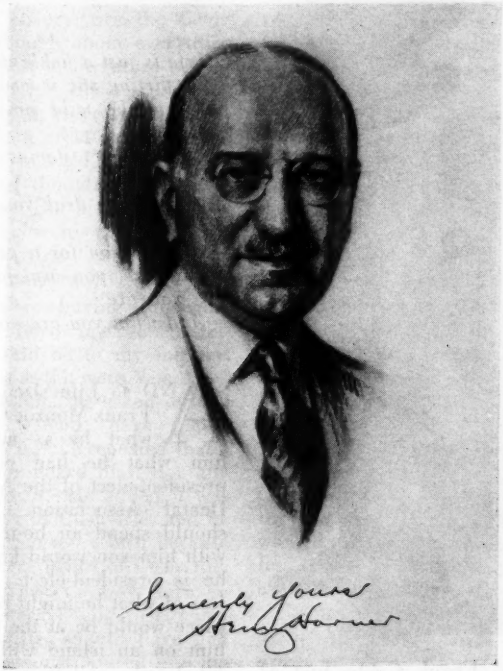


Governor Horner, who made history when he signed the Illinois Dental Bill, as reported in the August issue of ORAL HYGIENE.

Twenty-third Year **OCTOBER, 1933** **Vol. 23, No. 10**

Dr. Frank Casto just after making the thirteenth hole in one during the American Dental golf tournament at Louisville, September 25, 1925.

FRANK CASTO

By FRANK A. DUNN, D.D.S.

O Life is just a fickle dame,
To flirting she is prone,
She may be wild or may be tame
Like other dames you've known;
And she may deal you jolt or jar
Or pick you for a pet;
She'll size you up for what you are
And what you are you'll get.

AND so Life sized up Dr. Frank Monroe Casto for what he is and gave him what he had coming—president-elect of the American Dental Association. If you should spend an hour or two with him you would know why he is president-elect. Regardless of what he might be in, his place would be at the top. Put him on an island with a cannibal tribe and in a few days he would be friendly with all the cannibals, and in a year or less would be their chief. Put him in with a gathering of preachers or a stable of prize-fighters and soon they would

be warmly shaking his hand and pegging him as one-of-us.

He is just beyond the middle 50s, and he finds the same zest in them that he found in the 30s and 40s. The years have been kind to him because he has been kind to them. His chief recreations are golf and fishing, with a lively interest in other sports. Another recreation is reading—biography, essays, history, are the favorites, although about everything that is best in literature will be found in his library. Writing is rarely a recreation, but he has done a great deal of it and there is marked excellence of style and thought in whatever he writes. But his greatest happiness is in his perfect home life with Mrs. Casto, to whom he was married in 1902.

We were having luncheon. "I was born in Blanchester, Ohio," said he to my inquiry. He said it as if it were *New York City*. "What," he asked in hurt surprise, "you have never heard of it?" I repeated that I had never heard of it nor any place like it. He added it was just north of Cushville, and he seemed even more hurt because I had never heard of Cushville.

In fairness, a boy born in Blanchester, Ohio, just north of Cushville, should have had a few blessings poured into his lap as an offset—a rich, generous uncle or grandfather. But none of these had Frank Casto. Undoubtedly what he had was far better—rich, generous pioneer blood that had helped hew down forests and span rivers. But the forests were sufficiently hewed and the rivers well spanned when he came along, so he was content to hunt the forests and fish the rivers.

All the sports of youth were his: baseball and skating—and football such as it was in Blanchester, Ohio, just north of Cushville. But he specialized in *shinny*. *Shinny* is a sort of roughneck relative of golf, and his expertness at it probably explains the stack of cups he has won in golf tournaments. In *shinny* a club shaped in the manner of a niblick was used. But you didn't leisurely swing or chop at the little ball. Another youngster usually was right there to knock it in the opposite direction. The action was fast and careless. If the other youngster missed the ball he knew that his next best play was to throw you off your stroke by *accidentally* cracking you on the shin; hence, the name *shinny*.

There was no money for clubs in those days, and Frank Casto would search the woods for the sort of club that he wanted, and then he spent endless hours shaping it to his exact needs.

Spent endless hours shaping it to his exact needs—those words apply to almost everything he tackled, and *tackle* applies to the way he went at almost everything. He tackled telegraph operating after his graduation from high school, and mastered it. A professional life offered broader fields, and

he tackled medicine. While studying medicine he enrolled in the dental department and graduated in both professions, winning his degree of Doctor of Dental Surgery at Ohio State University in 1898, and his degree of Doctor of Medicine at the same university in 1900. Immediately he tackled pharmacy and won his degree in pharmacy in 1902.

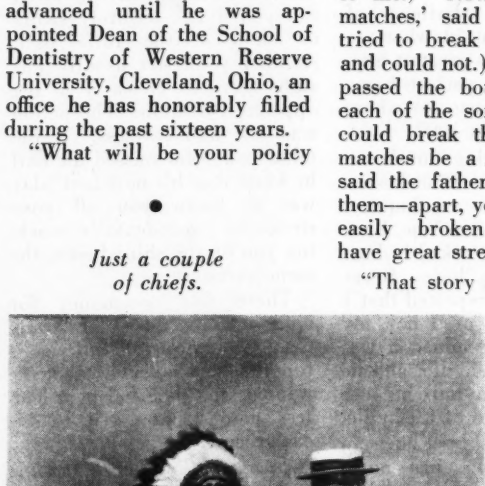
Dentistry appealed more to him than did medicine or pharmacy. He made it his life's work. Beginning his college connection as an assistant professor at his Alma Mater, he advanced until he was appointed Dean of the School of Dentistry of Western Reserve University, Cleveland, Ohio, an office he has honorably filled during the past sixteen years.

"What will be your policy as president of the American Dental Association?" He answered that question by reaching for a match box on the table and removing six matches.

"Perhaps you have heard the story of the father who had six wrangling sons—they were always in petty disagreements. The father handed a match to each son. (The doctor handed a match to me.) 'Break it,' he told them. (I broke it.) Then the father took six matches, put a rubber band around them and handed them to his first son. (The doctor handed them to me.) 'Now break the six matches,' said the father. (I tried to break the six matches and could not.) Then the father passed the bound matches to each of the sons, and not one could break them. 'Let these matches be a lesson to you,' said the father. 'You are like them—apart, you are weak and easily broken; united, you have great strength.'

"That story tells my policy, and I am sure it also tells the policy of every other officer of the American Dental Association."

There was a determined tone in his voice, and his chin seemed to move perceptibly forward. He is



Just a couple of chiefs.

that way when he is deeply serious. Business is business with him and must be handled with seriousness. If the occasion calls for humor he will welcome it with enthusiasm.

He chuckled at a reference to a joke that was played one night at a dinner. We had a public speaking class of twenty-five dentists. He was a member and I was chairman. For this particular dinner Doctor Casto and I had arranged a bit of fun.

"Bear in mind the three important rules," I said to the class. "Keep your eyes on the audience, stand in the proper position, and speak in a clear voice. Also, please remember that those in the audience must be attentive to the speaker." As I was saying these last words Doctor Casto began talking in an audible voice to Doctor Aufderheide beside him. I looked at him sharply and slowly repeated what I had said about giving attention to the speaker, but he kept right on talking. I broke off in the middle of my remark. Everyone could sense there was trouble in the air—it was clear that something was about to happen and it did happen.

"Doctor Casto, will you stop your talking while I have this floor?" If a mouse had been in the room at that moment and had winked his eye it would have sounded like a pistol shot. I continued with my remarks—and so did Doctor Casto with his. At the end of ten seconds I stopped. "Doctor Casto, you are extremely annoying and you are interfering with the conduct of this class. I must insist that you stop talking or leave the room." Things were certainly tense. Doctor Aufderheide looked as if he expected to see a dynamite bomb come sailing through the window. Walter Pryor sat back with a happy smile. He had paid good money to see many poor professional fights. This looked like a knock-him-down-and-drag-him-out brawl and he had a free, ringside seat. Wes Marriott was picking at his shirt trying to get it loose from the goose pimples that had sprung up all over him, as he afterward confessed.

Doctor Casto rose. His voice was vibrant with anger. He had been insulted. Nothing of this sort had ever happened to him before. The class had been incompetently conducted, he had wasted his time, and he would resign immediately. Up I hopped and told him he had been a hindrance instead of a help and it would be a good thing if he did resign. He poured some more bitter words upon my head and announced that he would leave the room. It was such a devastating hullabaloo that nearly everyone was stunned with surprise. To leave the room he had to pass my chair, and as he did so, that million dollar smile of his spread over his face, he pushed out his good right hand and said, "Well, Frank, we fooled them that time." And we certainly did.

He will get just as hearty a laugh out of a joke on himself. At a dinner James V. Gentilly made a book presentation speech. He was particularly flowery as he spoke of the culture and kindness of Doctor Casto; the breast in which beat the heart of a gentleman, a scholar, an artist; a friend to his fellow man and the type of man it was an honor to know. Concluded Jim Gentilly, "It is my privilege to present as a mark of our appreciation—— (Frank Casto was getting ready to rise. His smile was forced—Jim's extremely generous words of praise had slightly embarrassed him)—— this book to our good friend Dr. William Casto, son of our distinguished and esteemed dean of Western Reserve Dental College." No one got a bigger laugh out of it than Frank Casto. Dr. William Casto, his son, is associated with him in the practice of orthodontia.

Our luncheon was over and I reached for my money to pay the check. My money was gone. An hour before when I had reached for a gold pencil that I prized highly, that was gone. Immediately I thought of the watch I had carried for thirty years, and I let fly with some strong words when I found my watch also was gone.

Looking back I recalled that I had been jostled in a crowd on my way to the restaurant. Some pickpocket had hooked, landed, and cleaned me as he would a poor fish.

Ten minutes after leaving Doctor Casto I was about to light my pipe. Thank heaven, here was one consoling thought, the thief had not taken my pipe. I put my hand in the side pocket of my coat to get a match. My heart gave a mad, joyful leap, although the discovery seemed beyond all truth.

In that pocket were my money, pencil, and watch.

Hear ye, hear ye, hear ye, and let it be a warning, O reader! Dr. Frank Casto, among his other numerous accomplishments, is a master magician and a marvelously light fingered one. He had frisked me in a manner that marked him as one who would go far *picking up* a living in a profession less laborious than orthodontia. Later he had put everything in my side pocket.

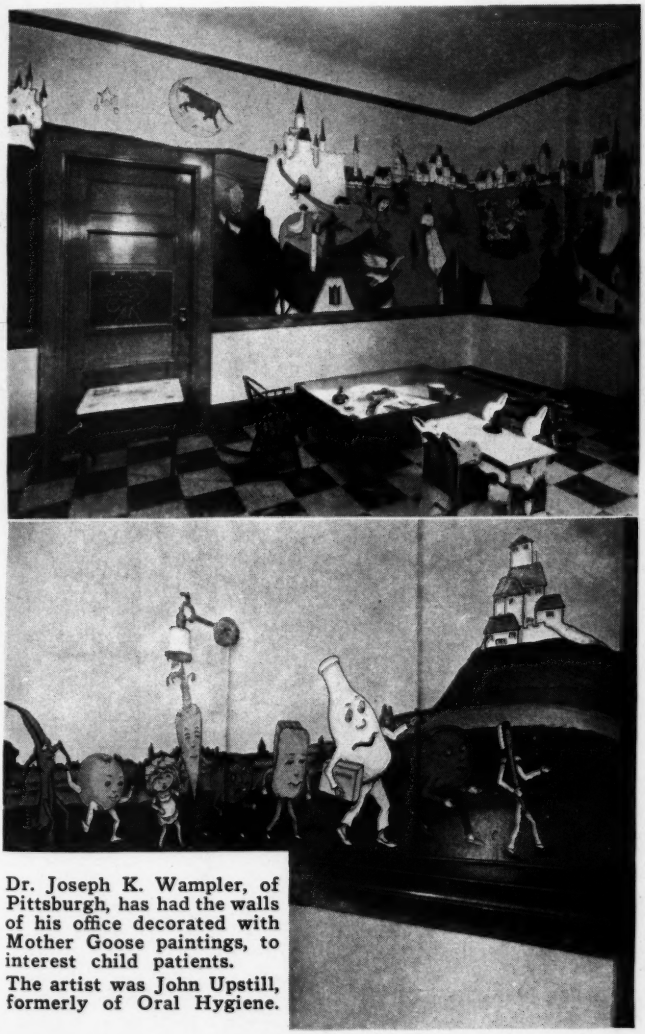
* * *

As college instructor, professor, and dean; as secretary, vice president, and president of his district and state dental societies; as worker on various committees and boards, he gave everything that he had. Into his friendships, the writing of an article, the making of an address, an orthodontia case, he will put everything he has.

He will do the same as president of the American Dental Association.

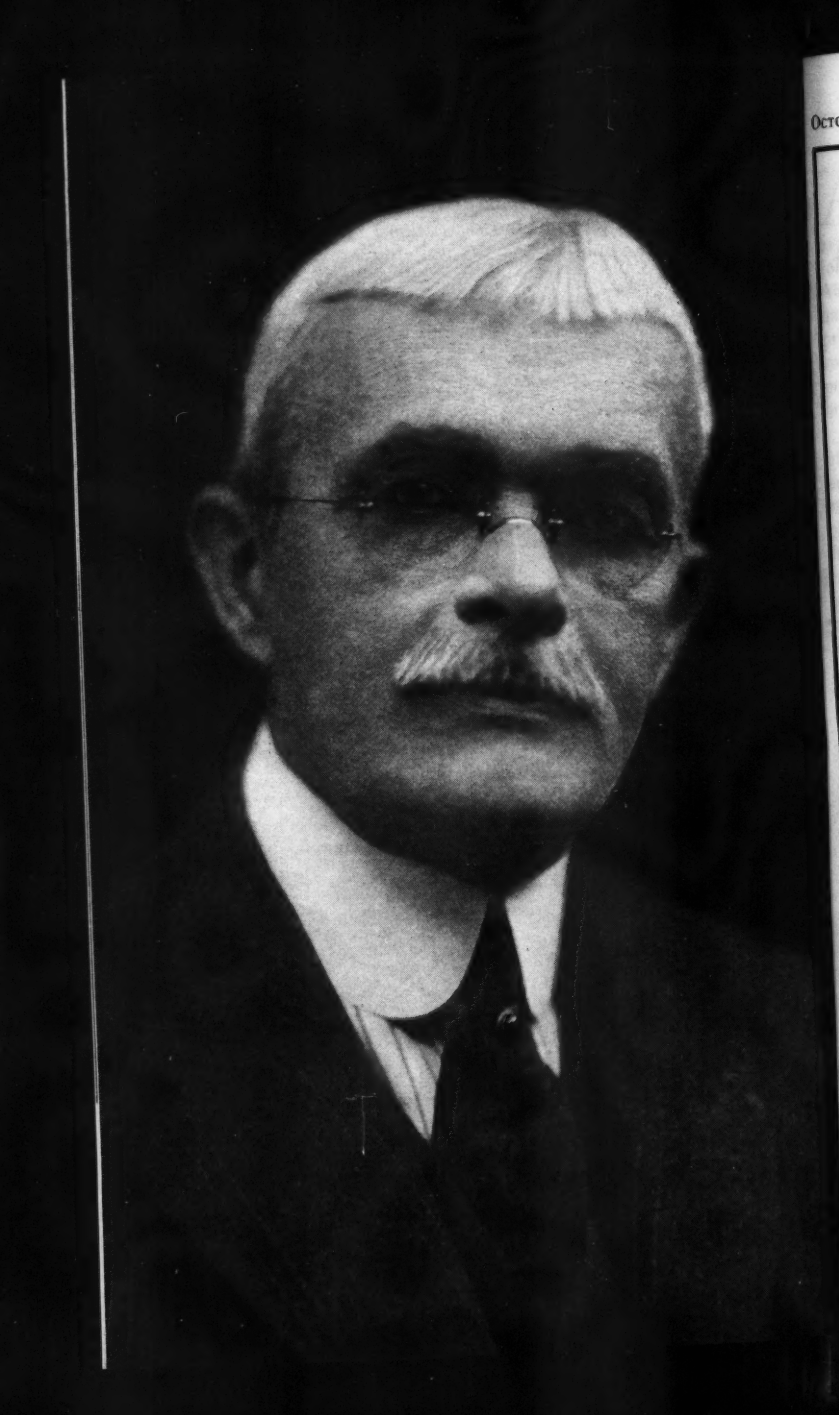
661 Rose Building
Cleveland, Ohio

MOTHER GOOSE IN A DENTAL OFFICE



Dr. Joseph K. Wampler, of Pittsburgh, has had the walls of his office decorated with Mother Goose paintings, to interest child patients.

The artist was John Upstill, formerly of Oral Hygiene.



Edward C. Kirk

IN the death of Dr. Edward C. Kirk, the literary fields of dentistry lost one of their most distinguished and constructive influences.

Probably no one man in the history of our profession exercised so definite an influence in the uplifting and dignifying of the literary and scientific side of our profession as did Doctor Kirk. To print even the titles and authors of those epoch-making scientific studies, papers, and discussions which were first given to the profession at large through the pages of *The Dental Cosmos* would use up more than this entire issue.

Doctor Kirk was a pioneer; a man of splendid vision and high determination who entered the publication field when dentistry, as a profession, was in its swaddling clothes. He believed in the future possibilities of this young and struggling profession, and, in order to make his vision a reality, he stopped at nothing in the way of personal effort.

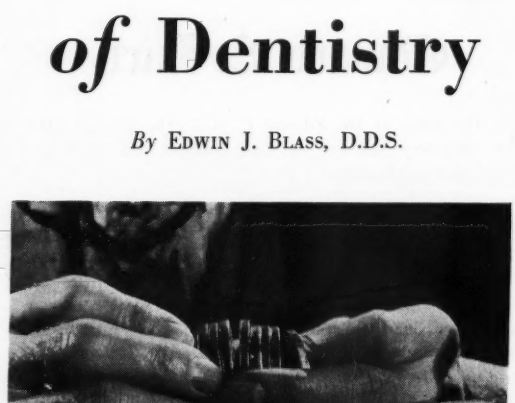
The once strong and splendid line of pioneers in early dental development has, during recent years, shown many vacancies—all caused by the one adversary whose onslaught no man may withstand—for to none save death would these stalwarts of our early and struggling days give way.

Edward C. Kirk has passed from the scene of his earthly labors. His memory will long be honored in the high places where once he walked and served with such outstanding distinction.

—*A. G. S.*

The Revival *of* Dentistry

By Edwin J. Blass, D.D.S.



Ewing Galloway

MONEY!

Can a formula be suggested to counteract the current thought that extravagant restorations and costly services are the only means of masticatory preservation?

At no time in the history of the present generation has any individual experienced such a financial jolt as in the period just passed. Although command of money has not yet materially improved, optimism over changed conditions is visibly turning perturbed thoughts to a more hopeful future.

The causes for the wrecking of financial structures have been advanced by religious leaders, students of economics, and others; but the paramount thought in the minds of the masses is not of the causes but the means possible to restore order out of chaos. Lobbies devoted to the interests of commerce, the smokeless chimneys of our great industries, and the plight of the farmer are all striving for legal enactments to remedy the condition. Justifiable as are their undisputed rights for complaint, our profession can hope for no political redress; our problem must be solved individually and through a more complete state and national organization.

No one will question the fact that the oral cavities of millions have been woefully neglected during the past three years. The potential dental needs of this vast army are so tremendous that, were every needy individual to seek immediate dental attention, turnstiles would be required at the doors of all dental offices to avoid a jam.

Experiencing a greatly depleted influx of patients and with the knowledge that our services are urgently needed, the question arises, "How can we attract patients to our offices, as in the days of yore?"

Is there a legitimate way to extract at least a modest fee from a depleted pocketbook? Can a formula be suggested to counteract the current thought that extravagant restorations and costly services are the only means of masticatory preservation? The word of mouth explanation to one's patients that less expensive but probably just as efficient dentistry can be performed now at prices consistent with present means is a slow process. The merchant would not expect the masses to respond to a price reduction in merchandise were he to mention the fact only to those with whom he came in contact.

I am not attempting a personal solution to our many problems, but I believe this is a question that should be given serious attention.

There is no doubt that the reason why many patients are not going to dental offices in the manner they should is that they think such services will be beyond their present means.

A glance out his window will convince the doubting Thomas that cars are apparently as numerous as ever. The ever-increasing filling stations foretell the fact that there still are many who have money beyond the cost of mere existence. The beauty parlors throughout the country seemingly lack no customers. Why are the fem-

"Orthodontia, if for no other reason save monetary considerations, is one method of correcting a financially distressed dental practice. Competition is not so keen as in the ordinary dental practice, and the alluring ads of the advertising offices will never attract the children for orthodontic correction."

•

inine members of the public religiously patronizing the emporiums of beauty at the expense of dentistry, when neglect of their conspicuous incisors disfigures their smiles? Are we stressing the health factor too strongly and talking too little about the esthetic? If health and comfort are less to be desired than aids to physical attraction, are we not derelict in business principles by not revising our talks on service?

Might not the fear of pain be instrumental in turning the steps of many away from the doors of dental offices? Do our patients know that every operation can be painlessly performed through novocaine anesthesia? I conscientiously believe that there is not one single factor of practice building so effective as the words of praise of a patient, pleased beyond measure, when dentistry has been painlessly and carefully performed.

Previously I have endeavored to stress the importance of, and at the same time lamented, the gross neglect in not giving malposed and undeveloped mouths in children the attention they deserve. Orthodontia is probably my hobby in practice but, nevertheless, I find this hobby tremendously interesting, and more conducive to a respectable cash balance in the bank than are the means many seek for diversified recreation in their hours of leisure.

As highly as I value child dentistry for its importance to health and normal development and in the preservation of the temporary teeth, were I asked to state which, in my estimation, is the more important—the filling of children's teeth or the correction of dental malformation—I would unhesitatingly state, "Correction." For I know of children bereft almost entirely of temporary teeth through neglect who could expose a mouth of beauty in later years. I know of no case where a constricted arch and malposed teeth have ever been changed in adult life by any means save dental attention.

Those who state that none but specialists should undertake correction are laboring under a destructive conclusion and ignore what has been accomplished in general practice. I can say with unqualified assurance that every den-

tist with the intelligence that should be his who holds the parchment, is just as qualified to practice orthodontia as the physician to wield the knife in a surgical operation. There are literally thousands of men and women in all walks of life who, today, are hobbling through life handicapped socially and in the battle for existence through no cause but lack of dental attention.

Since I began my efforts in magazine articles to induce more of our general practitioners to include orthodontia in their routine of service, I have been inundated with correspondence relative to how to begin and what to do. I have attempted to clarify the situation by personal replies, but found it physically impossible to answer all.

May I state here, briefly, as I did in previous articles, that you cannot begin such service without making the start? At first do not attempt the correction of a difficult case. Such a procedure would be crowned with as much success as a beginner in practice attempting the surgical removal of an impacted third molar.

When a child presents himself with what might be determined a simple case, call in the parent for presentation of the need and the expense involved. Quote a nominal fee based on cost of the appliance required, plus a reasonable profit that you alone can determine. This fee should be paid when the appliance is fitted. For the subsequent service covering the period of time required, name a fee for monthly attention.

Take impressions of both the upper and lower jaws and send them to a qualified laboratory for their advice and for the construction of the appliance. Some of these institutions of prosthetic constructive work have graduate, specially trained orthodontists who can advise you very well in your attempt to serve in this much needed aspect of dentistry. A successful culmination in the first simple case will spur you on, until any and all cases can be greatly aided, if not completely corrected. Textbooks on the subject, the frequent articles appearing regularly in professional publications, and postgraduate work will give much assistance.

Orthodontia, if for no other reason save monetary considerations, is one method of correcting a financially distressed dental practice. Competition is not so keen as in the ordinary dental practice, and the alluring ads of the advertising offices will never attract the children for orthodontic correction.

To sum up my suggestions to regain a profitable dental practice, some methods of getting more patients to cross the threshold of your office, I will offer suggestions occurring to me at the present time: Perform each operation painlessly by the use of novocaine anesthesia. Do not try to "extract" a $25 inlay or a $75 plate out of a $20 a week, or

less, income. Lastly, begin now and in a *legitimate* manner best known to yourself, to broadcast to the public that the regulation of children's teeth is performed in your office.

Sitting idly in the confines of your office and bemoaning the fact that conditions are terrible will never solve the problem of your unpaid rent. A practice must virtually be rebuilt. "Go to the ant, thou sluggard," is a quotation that can aptly be applied. To the victor belongs the spoils and the dentist who can visualize the public's new demand, and act honestly in accordance with it, will attain his share of prosperity that we know, now, is just around the corner.

Portage, Wisconsin

A RARE KILL

While driving between his home in New Canaan, Connecticut, and Ridgefield, Dr. R. Halsey McCready accidentally ran over and killed the 42-pound otter he is displaying in the accompanying illustration. Connecticut sportsmen declare this to be the first otter known in that section of New England in thirty years.

BROTHER BILL'S LETTERS

Series IV—No. 2

By GEORGE WOOD CLAPP, D.D.S.

MY dear John:

I neglected to ask on Sunday evening what time you would have breakfast, so I was ready for it at 7:15 Monday morning.

I supposed you would want to be in your office by eight o'clock, because you never can tell when something worth while may develop. If I were to refer here to the early bird and the worm, you might reply that you are no bird and do not care for worms, to which I should retort that you certainly are in need of whatever form of nutrition corresponds to worms for birds.

The longer I live, the more old-fashioned I become. I get more fun out of my practice than out of anything else I can do. There are not so many

leisure hours in it as there are in yours, but for every such hour a task awaits. There are articles in the dental magazines or in some of the medical or health magazines which are important to an understanding of dentistry as I see it. Perhaps there is some new application of technique to be worked out experimentally before it is tried on a patient.

Eight o'clock each week-day morning finds me in the office investing my time either in the patient of the hour or in myself in preparation for the patients of the future. If I were as anxious as you are, I could not be anywhere else because, instead of waiting for things to happen from some outside cause, as you are doing, I should be trying to make things happen from the inside.

You came downstairs just after eight o'clock and said that there were no appointments, so it did not make any difference what time we got to the office. We breakfasted leisurely and got there a little after nine.

Whatever has caused your practice to disappear, it is not the office itself. It is in a good building. The rooms are well chosen and well arranged. and the office is spotless. Your operating equipment is excellent. Your equipment for prosthetic service is, from my point of view, insufficient. I learned from you that this is because you do not do very much prosthetic work, and that you labor under the delusion that because you have, in days that are gone, passed along the responsibility and most of the work to the laboratory man and reaped an unreasonable profit by so doing, you can continue to do so.

Occurrences in your office while I was there show that this attitude breeds ignorance and inability and loss of patronage, reputation, and profit. and that it leads you into difficulties and losses which greater knowledge might help you to escape, at least in part. I shall show by using as an example another practice in your city that exactly the opposite attitude is productive of reputation, patronage, and profits. and that it may help any dentist to avoid some of the dangers into which he might otherwise unknowingly walk.

You need patronage and profits, but you turn your back on the logical source of them. You are not going to reap the profits from operative work, especially at the reduced fees now general.

Before I begin the story of the occurrence of Monday which impressed itself most upon my attention, I want to suggest these facts for your thoughtful consideration:

1. Well-done prosthetic work is the most profitable part of a general dental practice, while poorly done work is a source of very much more serious losses than can easily be visualized.

2. By including a considerable proportion of prosthetic

work a dentist can conserve his physical resources much better than when he does only operative work. I am much older than you, and you will think this is more important to me than to you. Not so, because if you are to develop a prosthetic technique which will make it worth while to conserve your physical resources, it is high time you were about it.

3. Prosthetic work enables a dentist to hold his practice later in life than he is likely to hold an operative practice. A few rare men, with unusual physical heritage or very wisely ordered lives, can continue to operate until very late in life; but the average dentist ages visibly shortly after he is fifty, and if he is alive after he is sixty, his operative output is likely to be small. If he has a laboratory bench of a convenient height for him and a comfortable chair, he can pass there many hours of physical rest, mental pleasure, and financial profit.

When we were in the office, there did not seem to be anything for anybody to do. The morning mail consisted mostly of bills and advertising. Miss Idyl said that there had been no telephone calls. You wandered about like an uneasy soul. There were several dental magazines on the table. As they did not show any signs of use, I picked up first one and then another and asked you some questions about articles with which it seemed to me you should be familiar. You didn't know anything about them, and as I saw that you were getting irritated, I dropped that matter. Finally you lost yourself in a story by Kelland and were, so to speak, "at rest." I was beginning to wonder whether you had not long been "at rest" mentally.

About ten-thirty a pleasant little old gentleman came in whom you introduced as Mr. Bland. After he was in the chair, you got permission to bring me in and I listened to the conversation.

What teeth Mr. Bland has are free from decay. He has lost the posteriors on the upper right side, back of the second bicuspid, and the second bicuspid and first and second molars on the left side below. There is a good deal of recession of the gums.

You took a brief look into the mouth and said to Mr. Bland: "You don't need very much, only to have those teeth cleaned and have a removable bridge on that lower left side so that you can chew your food properly, which you cannot do at the present time."

"What will that cost?" asked he.

If you had said, with a smile, "My fee for this just before the crash, when we were all more or less crazy, would have been $200, but now that we are all facing difficulties, it is only $150," you would have left him on familiar ground and mentally at ease to accept or reject. Instead of that you said, "My usual price for it would be

When you finished talking, he said, "Well, doctor, I'll think it over."

•

$200, but I will do it for $125."

He did not reply for quite a long time, and I fancied I could see the train of thought going through his mind. He felt that your reputation in the community should protect him from an overcharge, and if $200 was not an overcharge, $125 was an undercharge. His business sense told him that if the undercharge were to contain a profit, something he should receive would not be in the bridge. If it did not contain a profit, you would see no object in making the bridge.

His next question was, "Why so great a drop in the price?"

"Partly," you said, "because I have reduced all my fees to help people meet the depression. Partly because I am seriously in need of money and am willing to work at a still further reduced fee in order to earn it. You as the owner of this building know that I haven't been able to pay my rent for three months."

"Are conditions with the dentists so bad as that?" said he.

And then you allowed all your accumulated anxiety and bitterness to come out just where it should not have been shown.

"They could hardly be worse," you said. "Nobody is spending any money on his teeth. Those who have it are holding on to it, and those who haven't it can't spend it. This is going to be the worst winter we ever experienced. I imagine it will be all right for those who will get through, and that they will come out to better times, but a lot of us are not going to get through. This country is going to hell, and unless something

happens, I am going there before it does."*

I haven't any doubt that Mr. Bland has troubles of his own. But he needed the dental work, and, knowing that you were in arrears, he may have thought that he would get it now, partly for his own benefit and partly to help you.

When you finished talking, he said, "Well, doctor, I'll think it over."

With that he went out. And with him went one of your opportunities for service and profit.

"There you are," you said, as you sat down opposite me. "I give them a low price, and they go out and never come back."

"You drove him out," said I. "This country isn't going to hell, and you know it. We may have difficult times, but we're coming out on top again. If we were going to hell, a few teeth more or less wouldn't make any difference to Mr. Bland. If conditions in parts of the community he does not touch are as bad as you described, he might better wait a while before spending even $125. You have increased his fear and lowered his courage. You have lost patronage you might have had and made conditions a little worse for everybody."

That didn't register with you, so I turned the discussion to the mechanics of the case. The gum had fallen away a good deal behind the bicuspid, the root was narrow and the crown rather large. It was not a strong tooth. The third molar was never large or strong, and it had moved part way forward and tipped part way over. The ridge was narrow and not well calculated to withstand pressure. The upper second bicuspid had elongated a little into the space, and it had a particularly high buccal cusp that was likely to cause trouble.

I asked if you would take a sectional impression. You replied: "I haven't taken one of those since I left college. I'll take a good compound impression and carve the root of the bicuspid, and that will do." A "good" compound impression of that area in one piece cannot be taken.

I asked how you would support the stress of occlusion, since this was to be the side on which Mr. Bland was to masticate. You said: "I'll not have to bother about that. I have a very skillful laboratory man. He'll design the piece and find some way to take care of that upper bicuspid. I suppose he'll put clasps and occlusal rests on the teeth at each end of the space. I'm not worried about that. All I want is a chance to make the bridge." And with that you dismissed the subject.

But it wasn't out of my mind, so I did a little figuring. If Mr. Bland is to masticate the food his body will need for health, he will have to close on

*This is a practically verbatim report of an actual conversation between a dentist and a prospective patient. It had the result here described.—G. W. C.

that bridge about 4000 times a day. Suppose it is only 2000 times a day. His closing power would probably be at least 20 pounds at each closure, but call it 10 pounds. That means that abutments for the bridge would sustain a pressure of 10 tons a day more than their share. Suppose that we divide that by two again. That would require each abutment to carry 17 tons a week. The form and size and attachment of the abutments are not such that they can possibly withstand such a strain. The piece would have been a source of continual trouble and probably an early failure. And some of your reputation and future business would have failed with it.

I asked you how you settled on the fee of $125. You said, "My laboratory man would make that for about $25 and I could have $100 left. I certainly need it!"

One hundred dollars for prescribing a bridge that you cannot design nor make and for taking impressions and a bite which any mechanically-minded high-school boy could be taught to take better than you planned to!

As I saw you sitting there, a member of a profession, certified by a great university as competent to serve the public and by a great state as trustworthy and not only content to do this thing but also hopeful that you might yet get the chance, parts of the last two verses in the twenty-fifth chapter of Genesis rearranged themselves in my mind to read: "And Esau sold his birthright to Jacob. Thus Esau despised his birthright."

Yours,
Bill

220 West 42nd Street
New York, New York

THE COVER

The litte lady on the cover this month is Jean Louise Rasor, daughter of Dr. Frank B. Rasor, Columbus, Ohio.

The portrait was drawn by James Kaufmann of the Oral Hygiene staff, from a photograph sent the magazine by Frank Hamilton of Columbus.

DENTAL EDUCATION —*To What End?**

By W. N. MILLER, D.D.S.

IN the first two articles of this series we considered a background of twenty years practice in which frequent thought was given to a need for more adequate adaptation of the dental college curriculum to the problems of the dental practitioner. The patient's ultimate benefit has been constantly held in the foreground.

As a growth from this foundation we considered a survey of the dental colleges of the United States of America covering a period of two years (1929-1930) which was tabulated and returned to the colleges and retabulated before being considered accurate.

Following this were three attempts during the next two years to present the information obtained, together with a practitioner's criticism and suggestions, to the American Association of Dental Schools at their conventional sessions. Permission to present this subject to the Association was refused either from lack of interest in the executive board majority or lack of prestige on my part.

ORAL HYGIENE agreed to become the medium through which a presentation of this subject to the profession is consummated, and at the close of the present article will be found a questionnaire on which you are invited to express your sentiments. You are further invited to add any remarks that you may desire. Having called attention to peculiarities and discrepancies in the past and present manner of imparting education to the dental student, I present the following curriculum changes as a constructive solution of the real problem in the dental profession today. Quoting from the previous article, "I affirm that a course in the Practice of Dentistry should be the matrix within which all other curriculum subjects are grouped."

The course so designated is a correlation of two professorships: Oral Diagnosis and Applied Dental Economics.

A real education in the proper practicing of dentistry must be built upon five major considerations:

1. A certain technical skill and the desire to improve.
2. A keen diagnostic sense

*This is the third article in a series on this subject by Doctor Miller.

That there is a problem in the conduct of dental practices has been repeatedly demonstrated. That there is a correlation between a good office management plan and a rising quality of dental service can be as readily proved.

Interest in improving office management is keen. Individuals are writing and talking about it. Societies are devoting whole sections of their meetings to it. One out of every ten dentists in the United States has derived indisputable benefit from a single organized course of training.

The only controversy seems to center around the question, "How and when shall the necessary training be acquired by the dentist?"

Will you help me consider that problem and lend your influence to consumate a plan for its solution?—*W. N. M.*

based on health knowledge and a familiarity with diagnostic measures and agencies.

3. A knowledge of record-making, both case and financial, that really analyzes a student's actions, plus executive ability to control his actions.

4. A knowledge of the psychology of patients or, more specifically, a knowledge of the various reactions to dental information evinced by different types of people.

5. A college infirmary experience that accustoms him to blend these qualities into results so that his contacts with patients become sure and inspire confidence.

I will try to picture for you a method of imparting such an education.

1. For the purpose of saving precious time we will assume that everything is being done to impart technical skill and theoretical learning up to the junior year under the usual present plan.

2. The student is now possessed of some knowledge and it becomes our problem *to impart to him the wisdom to use that knowledge* wisely for his patients' ultimate benefit. I would institute a chair of Oral Diagnosis whose holder would deliver at the beginning of the junior year a series of lectures, followed in the same hour by hypothetical cases to be analyzed by the students.

I would conduct these analyses in the following manner:

Let each student have before him a form for recording information concerning the patient. Such a form must have seven distinct varieties of information:

1. The identity of the patient with whatever information can be obtained from him.

2. A record of the various aids employed in arriving at conclusions and explaining these conclusions to the patient.

3. A record of conditions in the oral cavity at present.

4. A record of conditions hidden from ocular examination but revealed by x-ray, transillumination, and other agents.

5. A picture of the patient's tendencies as revealed by a history of parentage.

6. A record of prognosis which is the hope of comfort and safety that is extended to the patient.

7. A record of the repairs proposed to bring about these results.

The instructor has a corresponding form completely filled out from which he reads first the printed reminder and then the information indicated. The student fills in his copy. A stereopticon is used to project the roentgenograms before the class clearly; and to present several views of the study models of the case.

At the first the instructor analyzes the roentgenograms before the class and they copy the information under "X-ray findings." As the class progresses, he asks various students to analyze in part or whole, indicating to the class such parts of the students' analysis that he considers correct for them to record on the form.

The form shown on page 1494 might be employed in making the record.

When the form has been filled in as far as "Prognosis" and "Repairs proposed," he proceeds to the next case and requires as work for the next period the student's written opinion of those two parts of the form, with drawings of any replacements indicated and the student's reasoning on why he would advise that type of restoration or that method of elimination of diseased conditions. (The student must be constantly reminded that a thorough scaling and polishing of the teeth has preceded the filling out of the diagnostic form.) This subject should have allotted to it at least sixty-four hours and be conducted throughout the junior and senior years. Often such a class could be conducted as an open forum. It is the *major* subject and the foundation of good dentistry. Evidence of progress in this course for a student's rating is based on the accuracy of his judgment in diagnosing hypothetical cases in the class room and the skill with which he conducts diagnoses in the senior clinic.

The third and fourth of the

INTRODUCTORY CHART OF INFORMATION AFFECTING DIAGNOSIS AND TREATMENT

Name Age

Address

Referred by

Charge to

Estimate desired

Arrangement of payment

Remarks regarding finances or business references

On file Date filed Taken out Destroyed

X-rays

Diagnosis

Drawings

Estimate

Findings on presentation

Mouth General A B C D Tongue

Mucous membrane Saliva

Gum margins Pyorrhea 1-2-3

Vincent's

Unusual presentations

Location of pericemental pockets

Dental irregularity

Traumatic occlusion

Evidences of wear

General attrition Sharp edges

Loose teeth

Repairs present in mouth

Cause of Gingivitis—Calculus—Rough Margins

Family Physician

Last examination

Desires—Gen. exam.; Estimate; Partial repair

Last dental examination

X-ray findings*

Family history*

Prognosis*

Repairs proposed*

*In printing such a form for actual use, space for remarks would be provided under each of these headings.

five major considerations constitute the work of the chair of Applied Dental Economics: "A knowledge of record-making, both case and financial, that really analyzes his action, plus the executive ability to control his actions"; "A knowledge of the various reactions to dental information evinced by different types of people."

The course of lectures I would prescribe for the junior year under this chair should consist of talks of general and applied psychology as pertaining to dentistry. They could be given in thirty-two hours' work and must be so arranged as to be freely entered into by the students themselves.

Students could be given assignments to interview a certain number of dentists in the college town and in their home towns on a definite list of questions and required to present their conclusions to the class as theses. These theses would be read and discussed in the last hours of the class by students and instructor.

The course of lectures to the senior students I would base on the fifteen chapters of a textbook I am writing, which deal with the fundamentals of a successful dental practice.

Alternated with these lectures would be fifteen hours spent by the students in filling out actual record blanks, as read to them by the instructor, to show the business conducted in a hypothetical office day by day. The details of business encountered would be cited. At first the instructor would tell them to record the information on the blank he called for. Later he should have them select the blanks as he cites the transaction. Thus would he discover their understanding of the course. This routine would be repeated many times until the proper recording became almost automatic.

It is not practical to discuss here the forms I would like to suggest, but I will see that they are available for those interested.

Perhaps it would be well to stress the point that I would always consider the service rendered in relation to the recompense received. I would start with an early lecture in the record-keeping course and explain to the student that known economic factors would confront him as soon as he attempts to practice his profession to obtain a livelihood.

Right here let me quote Dr. Howard R. Raper who cites a case in which a dentist had pounced upon some third molars and neglected four cavities—possibly because of a more attractive fee:

"The fees for the filling of teeth are not attractive enough. If our dental economists want to serve humanity, they should do whatever lies within their power to increase the fees for filling teeth. Not that this would give absolute insurance against such breaches of trust as the one just described but it would help and the fees are, at present, so low in many lo-

calities that they act as a distinct deterrent to the development of better work in this most important field."

I now have moral support to tell you that every other type of filling that is made, in technique and every other mechanical operation, will consume minutes and hours; that time is the material of which life is made; and that the student should learn early that a certain operation is entitled to at least a certain recompense based on the fact that there is a minimum fee per hour below which no dentist can safely go.

Many dental economists have pointed out that a $4,000 gross practice will net only slightly over $2,000, which is meager compared to a student's expectations, and that if a man can keep 1,000 income-producing hours filled each year he is an average man.

It is logical to find out (and such information is everywhere available) just the amount of time used by an average experienced dentist to produce a finished piece of work for a certain type of restoration. For example, if a simple mesio-occlusal amalgam filling in an upper left first molar using a local anesthetic for preparation should take an experienced man forty minutes to insert and ten minutes at another sitting to polish, the student should be taught that such a service must bear a minimum fee of $4.00. Of course, he may take an hour and a half to complete the case but he is really doing only fifty minutes' work and has imposed forty minutes of unnecessary tedium on his patient. In other words, I would correlate every service with a minimum fee based on at least the $4.00 per hour rate for an experienced operator.

Now, with this information available to the student throughout his training years, let us carry the plan into the clinic and see how it works. The fifth consideration in balancing a course in office management was, "A college infirmary experience that accustoms the student to blend the other four qualities into results so that his contacts with patients become sure and inspire confidence."

The management of the clinic must have the careful planning and active supervision of both the professor of Oral Diagnosis and the professor of Applied Dental Economics.

The student's clinic experience must begin in the junior year, when he will, for a time, perform the duties in the examining room, which would be cared for in private practice by the dental assistant.

Some confusion and duplication of effort must be expected when arranging the clinic routine to meet the proposed order. A sufficient number of examining rooms must be provided to permit the class to rotate in large enough groups to care for, with a reasonable degree of promptness, those coming for examination. The size of the senior classes will govern the number of rooms needed.

Until actual experience could test the theory, I would think that a class of one hundred students should have ten well-equipped operating rooms for examination. This would permit rotation of the class each ten days. One member of the second semester junior class and one senior would complete the personnel of the examining staff after the first few weeks in which the attendance of an instructor would be necessary.

Some question might arise as to the possibility of not having sufficient applications for examination to keep these examiners busy. In my opinion, *the examination and the diagnosing of the needs of the patient are the most important factors to be considered in the senior's instruction.* Therefore, I would not hesitate to provide examination material by a number of methods that might suggest themselves, and without regard to the completion of the services in every case.

Let us follow a patient who comes to the Senior Clinic for general care through the proposed routine. If the patient complains of pain and requires emergency treatment, relief is the first consideration, and the patient may or may not be cared for by the examiner for this emergency treatment. If the case calls for extraction, the teeth should be thoroughly scaled and polished first.

The first appointment after the emergency treatment finds the patient in the examining room where a thorough oral prophylactic treatment is administered by the senior student assisted by the junior student.

Full mouth x-ray exposures are made in every case immediately after the prophylaxis. Then the proper form devised for diagnostic information, with which the student has been familiar in the preceding course of lectures (see page 1494), is properly filled out. This amount of service for the average adult will keep the examining room busy for two and a half to three hours. If two cases were completed by each examining room each day, twenty patients a day would be cared for and each student would have completed approximately forty full mouth examinations during his clinic experience.

After the system has been in effect for two years, the student will have been present at the examinations of approximately one hundred cases. He has had time to analyze the reactions of patients to general examination and care, and has become familiar with *the importance of approaching the patient from the health angle rather than from the point system of credits, which prevails in most colleges and which tends to shrink the student's idea of his profession into the terms of fillings, bridges, and dentures.*

Patients may be assigned to various students in a manner that will equalize their technical experience, since it will not be important that a student

complete each individual case. I would, therefore, recommend that one fairly representative case be followed through by each student from the entrance of the examining room to the completion of the services. Each student will have thoroughly scaled and polished the teeth for forty patients, and will have become familiar with the proper instruction to give each one for the personal care of his mouth. Nine out of each ten days will be spent in actual operating, following out the proposed services as indicated by someone in the examining room. Human nature will be certain to help them find many flaws in examinations as conducted by their classmates. The major topic of conversation among the students will, as a result, cease to be confined to isolated reparative cases, and they will become conscious of the relation of all services needed in each particular mouth to the patient's general health.

At any patient's last appointment in the clinic, the routine will be reversed and the original examiner will have a chance to see the completed case, although he may not have performed any of the proposed services.

During the first few weeks, it will be necessary for an instructor to give some aid in the examining, although the senior student will have some knowledge of the proper method to pursue from his experience in assisting the year before. In any event the instructor must check over the proposed services as indicated by the student, make and explain any necessary changes, and sign the blank as being correctly diagnosed.

The importance of dentistry for children must not be overlooked. If the prevailing clinic does not include children enough to give each student ample experience, the cooperation of some near-by school should be obtained. A great deal of worthy charitable care can be given in this way.

Some general suggestions with regard to education and clinical practices can be made which I believe are not untimely.

Some better method of obtaining the attention of a demonstrator in the clinic *must* be devised.

Care must be taken that the college personnel does not become inbred. In many institutions it has become common practice to select a student of high technical ability to become a demonstrator for a year or two and then an assistant instructor *without his ever having operated a dental practice for a livelihood.* This is a serious mistake. I would suggest that a very promising student be placed for one or two years in the office of a thoroughly competent dentist at a very moderate salary, and then returned to the clinic as a demonstrator with the view to becoming an instructor.

I am aware that the student body is quick to take advan-

tage of the vacillating professor, and that many a peaceful instructor throws a shell of hardness about himself to make it difficult for a student to become too familiar. The final result of this method of protection is to give the professor an air of superiority. It seems that he is constantly impressing the student with the idea that a great chasm exists between them. I have known classes where only the most brazen could give a decent recitation. An instructor should avoid a supercilious air and should never humiliate a student before his classmates. Rather, he should constantly present the attitude which invites students to accept the helping hand across the space separating them from the instructors or the practitioners they hope to be.

The professor of Applied Dental Economics will have an equally busy program for the senior year. In addition to the lectures, which we have outlined, he will have to see that all case records and financial records have been accurately made, that proper charges have been entered in accordance with the basis we established, namely, "A minimum of $4.00 an hour for an experienced practitioner"; and that proper discount is made for the excess time that is needed for this student to complete the service.

A bookkeeping system is devised for entering daily all incoming business transactions, and a checking system is set up in the business office so that the student is paid by check for his services without regard to the amount collected from the patient by the school.

Evidence of progress in rating a student is based on his ability to shorten his working time for a satisfactory service toward the established control time of an experienced practitioner.

Referring to the illustration in which the student used one and one half hours to complete a service which our experience decided would occupy an average practitioner fifty minutes, we would consider that the student was approaching the ultimate in our expectations as he nears the sixty-minute mark. We can safely assume that perfection for the student will be twenty per cent slower than our control time, due to his inexperience, and to the lack of an assistant.

Much time and money have been devoted to this because I see the need of a change in the education of the dental student. I believe there are too few dentists practicing at the present time who are serving their patients to the best of their ability, and the reason for this is that they do not know how to diagnose thoroughly a patient's needs, nor to analyze the patient's desires.

I believe that the public wants better dentistry rather than cheaper dentistry, because better dentistry is eventually less expensive.

It is my opinion that the full-

time college faculty man loses contact with the man who practices the profession for a livelihood, and should welcome an opportunity to exchange points of view with sincere practitioners. I think, too, that there are many fossilized instruction methods used in the college curriculum because of inbred faculties, and I would like to see a little more of the milk of human kindness exhibited in the classroom.

I think that, with sixty-five per cent of the dental colleges of the United States open minded upon the teaching of dental economics to students, the time has come to expound ideas which are common among dental practitioners today.

I believe that a course in dental economics should concentrate on adapting general economics to dental practitioners' needs and that a student should be taught a fair method of arriving at a fee.

I believe that a course such as I have outlined would more than double the number of successful practitioners emerging from each class under the present system. I realize that some of the schools represented in my survey are already far along this road. I would like to see concerted action on the part of all colleges to teach young men not only to be dental *students* but also to become dental *practitioners*.

I shall be grateful if you will fill out the questionnaire on page 1501, adding anything you care to, and mail it to me.

Dryden Building
Flint, Michigan

Please complete the questionnaire on pages 1501 and 1502 and mail it to Dr. W. N. Miller, Dryden Bldg., Flint, Michigan.

Every practitioner is invited to register his answers. Anyone especially interested is urged to contribute additional suggestions. All information received will be tabulated carefully.

QUESTIONNAIRE

1. Year of graduation 2. College

3. Fraternity 4. Length of course

5. Did college have prescribed course in economics or office management?

6. Did this course present and answer the problems you met in practice?

7. Do you think you could have had any instruction that would have better prepared you to conduct your practice?

8. Did you learn in college to diagnose for every patient's *health needs* or was the emphasis laid on completing a certain number of foil fillings, inlays, amalgams, etc.?

9. Were you taught how to advise different types of patients?

10. Were you taught anything about the fair method of determining what fee you should charge for given operations or advice?

11. Do you think faculties of dental colleges should confer with a committee of practitioners to keep curriculum in step with modern practice?

12. Do you think dental practitioners are qualified to judge the type of instruction they received or that is now offered?

13. Would you favor an elective committee in the state society to study and advise concerning the curriculum?

14. Do you think any useful purpose can be served by dental practitioners attempting to influence or advise those responsible for the contents of dental college instruction?

15. Have you been economically successful?

16. What economic training have you had outside of your dental college training?

17.

Hours worked	Gross receipts
1929	1929
1930	1930
1931	1931
1932	1932

18. Are you conducting an ethical or a so-called advertising practice?

Remarks:

Name .....

Address .....

If you wish to remain unidentified do not sign.

NUTRITIONAL DEFICIENCIES*

By H. SIMONNET

IN common with the rest of the body, the oral cavity is subject to changes activated by influences depending upon external and internal factors. The purpose of this paper is to discuss the influence of nutrition, one of the most powerful of the external factors, since it is nutrition that supplies the necessary building materials to the organism.

We shall examine only the indirect but fundamental rôle which the nutritional regimen plays in the formation of the tooth.

To this end I shall take as a basis the research done by Mrs. May Mellanby, of Sheffield, England.

Mrs. Mellanby's investigations were carried out on dogs; some others on rabbits and rats corroborate the experiments.

* * *

The easy management of the dog, the possibility of making him consume different combinations of foods, and his comparatively rapid growth make of him the animal of choice.

Also, the structural analogies of the dog's teeth with human teeth are sufficiently pronounced to permit comparison and extrapolation.

It will serve our purpose to recapitulate briefly one of the numerous experiments of Mrs. Mellanby. Suppose that we have at our disposal a litter of young dogs. We will divide them into two groups, each counting more or less similar subjects. When these dogs are seven to eight weeks old we feed all of them with the following basic diet:

Bread	50-100 g.
Milk powder	10- 30 g.
Raw ham meat	10- 20 g.
Orange juice	3- 5 cc.
Dried yeast	5- 10 g.
Salt	1 g.

The dogs of one group are given a daily dose of 10 cc. of olive or linseed oil, those of the other group 10 cc. of a good brand of cod liver oil.

All the animals will develop normally. When they have attained the age of seven to eight

*Translated by ORAL HYGIENE from *La Revue Odontologique*

months, we will examine their teeth with the naked eye, on the screen, under the microscope, and by chemical analysis.

We will thus obtain data, summarized in the following table, which will determine the state of dentition in both groups.

An examination shows that

	Cod Liver Oil	*Olive or Linseed Oil*
External Appearance		
Enamel	Normal, white and smooth	Irregular, pigmented
Gums	Normal	Soft tissue, thicker, deeper Jaws thicker and less firm
Radiography		
General calcification	Good	Incomplete
Roots	Well calcified	Incompletely calcified
Lamina dura	Compact and well defined	Hardly visible
Alveolar bone	Dense, bone trabeculae well visible	Less dense, trabeculae incompletely ossified
Microscopic Appearance		
Alveolar ridge	Thin, compact, well calcified	Very thick, irregularly calcified, abundant osteoid tissue
Gums	Thin	Thick
Epithelium	Thin, without submucous prolongations	Hypertrophied, numerous prolongations, continuity with the enamel not apparent
Chorion	No cellular infiltration	Cellular infiltration
Periodontal membranes	Thin and regular	Irregular
Enamel	Well calcified	Thin and badly calcified
Dentine	Well calcified, no interglobular spaces	Badly calcified, numerous interglobular spaces
Alveolar bone	Thin	Slightly thickened
Jaw	Well calcified	Abundant osteoid tissue and incomplete calcification
Ca content per cent of live weight	28.0	12.0

important, characteristic lesions of the teeth and the investing tissues can be produced *under well defined experimental conditions in a very short time in subjects otherwise of normal development.*

What is the difference between the diets? Which element is lacking, or, inversely, which element is overabundant to cause the disturbances in the growth and development of dental structures?

We may at once eliminate the physical constitution of the regimen, its digestibility, its energy value, its protein or carbohydrate content, its content in antiscorbutic and antineuritic vitamins. On the other hand, we note a difference in the fats consumed, not in their quantity or chemical quality, but in their ability to supply fat soluble vitamins.

Olive and linseed oils differ from cod liver oil in that they lack both the growth promoting and anti-infectious vitamin A and the antirachitic principle, vitamin D, indispensable for calcium fixation, while cod liver oil is rich in both.

Under experimental conditions we find that adding to a deficient dietary foodstuffs rich in vitamins A and D improves it exactly in proportion to the vitamin content of these foods. Butter and margarine are decidedly beneficial, while lard and hydrogenated fats are inefficient. The vegetable oils, such as palm, cottonseed, and vegetable margarines, give generally poor results; cocoanut butter, on the other hand, is rather favorable. These facts bear out what we know about the vitamin A and D content of these substances.

Such demonstrations can be made still more convincing if we employ preparations that contain these vitamins in a more concentrated form; for example, by giving the animals an extract of beef liver rich in vitamin A, or irradiated ergosterol, the most active source of the antirachitic principle known.

However, the experiment just described is still somewhat complex. Two vitamins are involved. Is it to both jointly that the favorable action of cod liver oil is due, or only one?

Suffice it to say that only vitamin D activates the process of calcification. The dental defects noted are traceable to a vitamin D deficiency. Since vitamin A does not affect ossification and calcification, its lack does not directly affect the quality of the teeth. However, in the present case vitamin A is important in maintaining the integrity of the gingival epithelium.***

Mrs. Mellanby has also shown that the regimen having an insufficient vitamin D potency gives variable degrees of calcification according to the quantity and the nature of the cereal that it contains.

For instance, in experimental animals fed on the identical vitamin D deficient dietary, it is always the subject consuming most bread and which, by the way, grows fastest that will have the worst teeth.

With an equal consumption of cereals of equal vitamin D potency, the degree of calcification is satisfactory when the experimental subject consumes wheat or rice, while it is very bad in the case of oats. Rye, barley, and corn stand halfway between wheat and oats. Finally, whole wheat flour is less favorable than white flour, and among the constituents of the wheat grain the bran is inoffensive, while the wheat germ is harmful.

Mrs. Mellanby has endeavored to determine the nature of this anticalcifying principle. It cannot be connected with the carbohydrate or protein content, nor with the amount of calcium or phosphorus, or the relative proportions of these two minerals; nor does the acid-base proportion of the ash of the experimental foods give any useful indication. It seems to be determined not so much by the fat content as rather by the nature of these substances, and must be looked for in the saponifiable portion of the fats.

It should be noted that it resists the temperature of the autoclave, that it is destroved by acid hydrolysis, and that the action of germination or of the maltase seems, as a rule, to diminish its intensity.

The importance of calcium and of the phosphates in the course of rickets can be found also here; but experience shows that again the vitamin D plays the leading part. When it is lacking, no amount of calcium or phosphates is able to produce a good dentition; but when the antirachitic principle is present in sufficient amount, the quantity of calcium salts in the alimentary regimen may be considerably lowered without detriment. Therefore, this vitamin behaves very much like a principle which is indispensable to the fixation of calcium. This is in accord with the general opinion on vitamins, all of which intervene to permit the utilization of the other food factors.

The nutritional factor is more important than all the other hygienic requirements, such as exercise, fresh air, and light. The formation of the teeth remains excellent in subjects that are kept in semi-darkness, if the ration is well constituted; this, however, does not mean that life in the open is not favorable, since the dentition of animals consuming a deficient diet improves, either by daily exposure to the sun or by ultra-violet irradiation. But even here, these treatments are unable to counteract entirely and surely the effects of nutrition.

Certain ideas appear to me to be important from the point of view of prevention of dental disease. To simplify my remarks I shall state them as affirmations, perhaps somewhat categorical, but which—I assure you—do not exaggerate the experimental data.

First of all, there is the pre- and postnatal alimentation that means practically the nutrition of the mother.

When the mother's diet is rich in vitamin D, the teeth of the offspring are well calcified and appear early. On the other hand, if it lacks vitamin D, and if, besides, it is rich in the anticalcifying principle—oats, for instance—the temporary teeth are defective and their eruption is retarded.

The effect of a regimen poor in vitamin D given after weaning is less unfavorable if, during gestation and suckling, the mother has received a diet with sufficient vitamin D. Inversely, if the mother's diet is poor in this vitamin, not only is the permanent dentition of the offspring defective, but also the eruption of the teeth is retarded and the appearance of the defects much hastened.

The alterations caused by a deficient alimentation cannot be prevented, nor are they easily amended by a correct nutrition later on; they are practically irreversible. It is more advantageous to have experimental animals consume for a few weeks a correct diet and then subject them to a deficient one, than it is to give them food poor in vitamins during the period of active growth and then feed them correctly for many months. In other words, if the food has been poor in vitamins during the first few months of life, the dentition will be deficient whatever may be the quality of the food eaten later on.

It is, therefore, important to watch the alimentation of mother and child until the evolution of the teeth is terminated. It is worthy of notice that the tooth is more sensitive to nutritional deficiencies than the rest of the organism.***

Two other aspects of the influence of nutrition on the development of the teeth are worthy of mention.

The first deals with the rôle played by vitamin A in pyorrhea alveolaris. It is possible to provoke in the dog clinical symptoms which closely resemble those of the human simply by feeding the animal over a period of time on a regimen poor in vitamin A. Inversely, it is possible to prevent such pathological changes by correcting the nutrition.

Vitamin A in these cases seems to have the anti-infectious effect ascribed to it under other circumstances. It is quite generally known that in the absence of vitamin A not only do the local and general infections (ocular, bronchial, vesicular infections), become prevalent but also that an abundant supply of vitamin A in the healthy organism permits the latter to resist more efficiently infections of any kind.

The other point refers to the rôle of the vitamins in the etiology of dental caries which will give rise to many more experiments.

The numerous attempts made by Mrs. Mellanby to provoke caries in dogs have all failed.

However, the character of the alimentary regimen, particularly its antirachitic vitamin

content, seems of great importance in the way the tooth reacts to traumatism. The quality of the secondary dentine, the degree of its calcification, and its hardness depend chiefly on the amount of vitamin D in the food. It is, therefore, reasonable to assume that so long as the tooth is alive the manner in which the odontoblasts function, the manner in which calcification of the tissues will take place, depends upon the presence of the antirachitic principle, just as is the case in the formation of bone tissue.

One can, then, assume that the incidence of caries may be influenced by the antirachitic vitamin.

This thought takes on definite value if one studies the results of an investigation of over three hundred children in the city of Birmingham.

The experiment consists in a careful comparison of the oral conditions in three groups of children who live, as closely as possible, on identical nutritional regimens. One group is given a supplement of olive oil, another molasses, and the third cod liver oil. Other experiments compare these substances with a preparation of irradiated ergosterol.

The most important data accumulated in these investigations refer to the appearance of symptoms of dental decay. The effect of the different treatments is clearly demonstrated in the following figures showing the increase in the percentage of decayed teeth in each group over an interval of two years.

Figures are about the same in the case of irradiated ergosterol which forms the subject of another series of experiments.

The extraordinary sensitivity and prompt reaction of the odontoblasts in the presence of vitamin D deficiency should be considered carefully, as well as the definite, irreversible consequences resulting from this deficiency. Of further interest is the repercussion of vitamin A deficiency on the resistance of the soft tissues and the peridental membrances against infection.

But most important of all is the possibility, of great interest from the social point of view, of preventing dental disease, not only by aborting its appearance in the child by means of appropriate treatment, but also by a careful supervision of the mother's nutrition during pregnancy and nursing.

Supplement	*All teeth examined*	*Deciduous teeth*	*Permanent teeth*	*1st and 2nd Bicuspids*
Molasses	10.33	12.55	11.00	21.87
Olive Oil	7.63	5.06	10.42	14.53
Cod Liver Oil	2.97	4.85	3.63	1.29
Supplement	***All teeth examined***	***Deciduous teeth***	***Permanent teeth***	***1st and 2nd Bicuspids***
Olive Oil	6.61	5.58	8.68	14.16
Irradiated Ergosterol	2.09	3.68	3.39	1.28

THE PASSING OF AN EMINENT DENTIST AND INVENTOR

IN the death of Dr. Herman E. S. Chayes dentistry loses one of its most brilliant inventive minds, and an operator whose ability closely bordered on the miraculous. Particularly in the field of bridge construction—which under his hands rose to new heights of achievement—Doctor Chayes was an outstanding genius.

Though too exacting and expensive for adaptation to the average practice, nevertheless the brilliant results achieved by this energetic inventor and operator did much to raise the standard of all allied branches of dental restorative work.

To few men does dentistry owe so large a debt of gratitude for their achievements as to Doctor Chayes.

W. Linford Smith
Founder

ORAL HYGIENE

ARTHUR G. SMITH, D.M.D., F.A.C.D.
Editor

ENCOURAGING ACHIEVEMENTS

FROM far-off California come very encouraging indications of the progress being made in that state against illegal practitioners of dentistry.

That this problem in this particular state is a most difficult one no one will deny. However, under the aggressive leadership of Dr. Kenneth I. Nesbitt, present secretary of the State Board of Dental Examiners, most heartening inroads have been made against the illegal practitioner and the most flagrant of those offenders who prey upon the ignorance and credulity of the masses.

It is much to be regretted that space prohibits the publication in full of Doctor Nesbitt's interesting report of the activities of his department during recent months.

A duly licensed Russian physician turned all patients who needed dental services over to his entirely *unlicensed* wife who posed as a legally qualified dentist.

A Chinese widower was manfully carrying on the practice once legally conducted by his deceased wife.

A very considerable number of other persons were found to be evading the legal and proper requirements governing dental practice.

To secure convincing "patients" to enter such offices, *have actual dental work done in their own mouths*, make payment and secure a receipt was by no means an easy matter; yet exactly this program was carried out in prac-

tically every case, and convictions were readily secured.

Doctor Nesbitt is unreserved in his praise of the co-operation received from local police officers, judges, and district attorneys in prosecuting and convicting offenders.

LETTING NATURE TAKE ITS COURSE

THE following letter, commenting on a recent episode described in ORAL HYGIENE for July, page 1047, has been received:

Dear Doctor:

I have just finished reading the little episode between you and your friend, who specializes in orthodontia. I am a general practitioner of dentistry and know very little about the subject of orthodontia. I do know, however, that in a child of three and one-half years of age it is very impractical, to say the least, for anyone to place dentures in the child's mouth. Any dentist knows that a growing child develops harmoniously, and, should there be a denture in the child's mouth to inhibit the growth of bones, you can imagine the jumbled malposed teeth of future years. If this is "giving the boy a chance in life," I prefer the old-fashioned method of allowing nature to take its course.

Yours truly,

C. A. H.

Let us examine the preference of this contributor (whose communication, by the way, is without signature or other definite marks of identification) for letting nature take its course.

Such an attitude, if consistently followed, would rule out all surgery, all advancement whatsoever in any department of medicine. Indeed, if such an attitude had been consistently held and adhered to by all men, we would still be on absolutely the same plane as all other animals so far as the care of wounds, accident, and disease is concerned.

Of course, the unknown advocate of this hopelessly obsolete method of caring for diseased and broken down deciduous teeth cannot, as a man who is devoting his life

to the practice of dentistry, consistently advocate the let-alone method in all dental ailments!

Such an attitude would be in absolute opposition to his entire life's work. And no man has yet been clever enough to move in two opposite directions at the same time!

What, then, is the trouble? The matter is simple enough! Such expressions of opinion are written and sent in without a thought as to the *basic underlying psychology* or mental reaction which has prompted them.

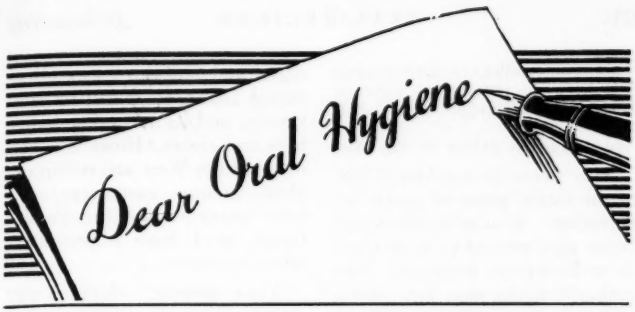
The action taken by the orthodontist who made the full upper and partial lower dentures for a child of three and a half years was *without precedent! Therefore, wrong!*

Such is the usual reaction to anything new and untried of the vast majority of the public.

In his letter the unknown correspondent definitely identifies himself as a member of that great human mass who stand ready at all times to denounce vehemently—from some safe vantage point, if possible—all forms of change from the established and accepted order of procedure in any line.

ORAL HYGIENE is happy to be able to state that the actual incident described in the July issue took place over five years ago. Ample and accurate casts, photographs, and other records, are on file in the office of the orthodontist in question, showing the jaws as they then were and as they are at present. The development of this small patient has been not only most satisfactory, but highly unusual. His permanent incisors are now all in position, his jaws are of normal size, and his health is vastly improved. Of course, his dentures were worn only as a temporary aid to chewing and general facial development.

It is impossible to conceive of such a favorable outcome as a result of a program of non-interference; just drifting —while "nature took its course"!



"I do not agree with anything you say, but I will fight to the death for your right to say it."
—*Voltaire*

PLEASANT AFTERMATH

After reading Doctor Smith's articles in ORAL HYGIENE* and looking at and meditating on the pictures of the long-forgotten skulls, I recalled a poem I ran across a good many years ago in some magazine. I don't remember the name of it. I thought it might be of some interest to your readers, so I am passing it on as an expression of how much I enjoy ORAL HYGIENE.

TO A SKELETON

Behold this ruin: 'twas a skull
Once of ethereal spirit full;
This narrow cell was life's retreat
This space was thought's mysterious seat.
What beauteous visions filled this spot?
What dreams of pleasure long forgot?
Nor hope, nor joy, nor love, nor fear
Has left one trace of record here.

Beneath this mouldering canopy
Once shone the bright and busy eye;
But start not at the dismal void
If social love that eye employed.
If with no lawless fire it gleamed,
But through it dews of kindness beamed
That eye shall be forever bright
When stars and sun are sunk in night.

Within this hollow cavern hung
The ready, swift, and tuneful tongue.
If falsehood's honey it disdained,
And, when it could not praise, was chained;
If bold in virtue's cause it spoke,
Yet gentle concord never broke,
This silent tongue shall plead for thee
When time unveils eternity!

Say, did these fingers delve the mine
Or with the envied rubies shine?
To hew the rock, or wear the gem
Can little now avail to them.
But if the page of truth they sought
Or comfort to the mourner brought
These hands a richer meed shall claim
Than all that wait on wealth or fame.

Avails it whether bare or shod
These feet the paths of duty trod?
If from the bowers of ease they fled
To seek affliction's humble shed;

*ORAL HYGIENE, October, 1932, p. 1855; December, 1932, p. 2207; March, 1933, p. 419.

If grandeur's guilty bed they spurned
And home to virtue's cot returned
These feet with angels' wings shall vie
And tread the palace to the sky!

This poem is considered one of the rarest gems of poetic inspiration. It was found many years ago, pinned to a skeleton in a European museum. The author's name was not given, and was never known. It is said that the English government offered a large reward for his name, but it was never ascertained. — T. B. McDONALD, D.D.S., *Auburn, Alabama*

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TO DOCTOR ROWELL

In spite of the extensive travel of the present day and the universal news facilities of our press, I know that there is a widespread belief, in New York and other centers of the East, that the few professional men who have dared the dangers of the West are so occupied in defending their lives and property from marauding Indians and in dodging great herds of buffalo that they have little time for quiet thought on the problems that beset the medical and dental professions.

It may seem, therefore, rather presumptuous for one who lives way out where the West ends, or nearly so, to undertake to instruct in this matter of the relation between medicine and dentistry.

This state of mind does not exist, of course, among those who have toured Oregon and noted besides its absence of Indians and buffalo, its excellent paved roads, its beautiful university, and its many fine buildings and stores. However, such ideas of the West are still prevalent among easterners who have never visited the Pacific Coast, as I have observed in many contacts.

Your article,* doctor, was written in such evident good faith that I am sure that you desire to know the best method of getting a proper cooperation between the two allied professions and I am going to tell you very frankly just how we look at this problem, for I feel that conditions are, basically, not different there from here.

A number of years ago it was necessary for the physician to be prepared not only to judge when a tooth should be extracted but also to have the instruments and skill to do the work; but we have traveled far in the last few years and dentistry has not only made a place for itself as a necessary health service but the field of dentistry, which no doubt seems a narrow field to the physician, has also presented so many problems that many men are devoting their entire time to but one phase of dentistry. In each of these specialties some men have developed so great an insight into its particular problems that the dentists in general practice do not feel that they are displaying undue ignorance to tell some of their patients that their experience

*ORAL HYGIENE, August, 1933, p. 1180.

in a particular field is so limited that they do not feel qualified to give an opinion and to refer the patient to a specialist in that work.

You mention one problem of a twisted lateral incisor. To put you in a position to judge this one case would require a rather liberal education. The average general practitioner of dentistry would not be equipped to diagnose the difficulty and when or how it should be treated. In this locality few if any of them would attempt it. In the case you mention, the cause might be any one of the following: supernumerary tooth resting against the root of the lateral, cuspid forced against the root of the lateral by the retarded resorption of the root of the temporary cuspid, too narrow an arch, or the impingment of the lower incisors in occlusion.

I would say that for a physician to make the statement, to a child's parents, that orthodontia was required and should be done immediately, would be putting himself unnecessarily "on the spot."

But, if he would say, "It appears to me that your child is developing an irregularity of the teeth that may be serious. These conditions can be corrected, but the best time for treatment depends on varying factors. This work is done by men who are continually observing such conditions and their judgment on what is best to do and when it can best be done is, naturally, better than mine. I want you to go over and let Doctor Blank examine the case, for I am sure that he will advise you for the best interests of the child."

Such a statement would leave you in the clear and, instead of impressing the parents with your ignorance of orthodontia, you would assure them that you are interested in the welfare of their child—unless human nature is different in New York from what it is on the Pacific Coast. If you don't at present know an orthodontist who has the ability and honor to give advice for the best interest of the patient, you should enlarge the circle of your acquaintances until you find one. There are many.

When I was in general practice, a middle-aged man came into my office one day with the card of a local physician on the back of which was written, "This man has rheumatism. Perhaps he would be better if he had his teeth out." An examination revealed an excellent set of teeth and healthy gums. Naturally I didn't take out his teeth though I had much rather concur in the diagnosis of the physician than not, because we all like referred patients.

One can imagine that this patient would have been much more impressed with the wisdom of his physician if he had said, "I have not yet found the cause of your rheumatism. I know that mouth infections are often the cause. I am sending you down to Doctor Blank for

a thorough examination. If necessary, you may have to lose some teeth but we can soon eliminate that cause or rule it out."

I should say that it is a very simple matter to tell the physician all that he needs to know about dentistry. He never needs to make decisions on whether an inflamed gum condition is pyorrhea or a simple gingivitis, whether teeth should be extracted, filled or crowned or whether orthodontia should be done. If he can recognize that there are abnormal oral conditions he should recommend them to a dentist and he should be well enough acquainted with several in order to judge of their ability. There is no doubt that there is a great difference in the ability and integrity of various dentists, but my observation is that they average as well in their field as the members of the medical profession do in theirs.

To show you the other side of the picture, which may make the whole matter plainer, I have never known a dentist to examine a patient who complained of a pain in the abdominal region (and occasionally one does even in a dental chair) and say, "You have acute appendicitis. Go right over to Doctor Blank and tell him to take your appendix out." Sounds awfully funny from that side, doesn't it? But that is exactly the way physicians have handled dental cases since time immemorial.

The two professions need closer cooperation, yes. But neither one should take in territory in which some one more proficient is available. The dentist should observe throat and general conditions and suggest that patients see a reputable physician, preferrably one who is specializing in the field where the trouble seems to be. He should make no attempt to diagnose the condition because his view is necessarily narrow from lack of experience with such conditions.

Where there is a suspicion of dental involvement, the physician should refer the patient to a dependable dentist for examination because he is not equipped by education or experience to diagnose dental conditions.

By such mutual help the patient will receive the best service and patients with reasonable intelligence will realize that they have been done a greater service, by being referred to someone who *knew*, than they would have been by someone trying to impress them that he knew all about everything.—J. E. RICHMOND, D.D.S., *Eugene, Oregon*

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COVER-TO-COVER

I read ORAL HYGIENE from cover to cover, for I get more real help from it than from any other magazine.—EDWIN S. KENT, D.D.S., *Portsmouth, New Hampshire*

Ask ORAL HYGIENE

CONDUCTED BY
V. CLYDE SMEDLEY, D.D.S., AND
GEORGE R. WARNER, M.D., D.D.S.,
1206 REPUBLIC BUILDING,
DENVER, COLORADO

Please communicate directly with the Department Editors. Please enclose postage. Questions and answers of general interest will be published.

PREPARING TEETH FOR PORCELAIN WORK

Q.—I have been doing a great deal of porcelain restorations, such as porcelain jackets, porcelain bridges, veneer and thimble crowns, and porcelain inlays. I have been quite successful with this work, but occasionally I find a tooth under a porcelain jacket extremely sensitive. I also find drying the tooth before cementing a porcelain jacket very difficult and painful to the patient. I first dry the tooth with warm alcohol and then desensitize it with 15 per cent phenol, but it still remains very sensitive. Can you help me improve my technique?—H.Z.

A.—My brother does most of the porcelain inlay and jacket crown work in our group and he has very little difficulty with sensitiveness of the prepared teeth, either before or after the crowns are set. His procedure is as follows:

He removes the enamel and grinds the stub to the correct form under a nerve block and before pressing home the compound as it is confined in a properly fitted copper band, he bathes the stub with S.T. 37. He feels that this antiseptic as it comes to us in a glycerine solution is safer to drive into the open ends of the canaliculi of the ground dentine with the piston-like pressure of the compound than the saliva and possible bacteria that it may contain.

Before dismissing the patient, at this sitting he fits

around the prepared shoulder a cotton thread that has been saturated with the sedative cement that we have been using for thirty years, the formula for which has been published several times in this department. The entire prepared crown is covered with a thin layer of this sedative cement which is then covered by a mix of silicate cement sufficient to form a temporary crown.

When the jacket is finished, remove the temporary crown. After fitting the jacket, wipe the stump with Zonite, which is the Dakin chlorazine solution stabilized, dry with warm air, and cement jacket with silicate cement.

We formerly used phenol and alcohol for sterilizing and drying crown and cavity preparations but find less pain and irritation with the foregoing procedure.—V. C. Smedley

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DISCOMFORT FROM DENTURES

Q.—One of my patients for whom I recently made dentures complains of a burning sensation in the roof of her mouth. It seems to be in the center of the mouth, where the two parts of the maxilla join.

I have tried relieving the upper denture, but it has not helped. It may be possible that I could not find the proper place to relieve.

What do you suggest that I try next?—S. V. L.

A.—I would suggest that you have this patient leave her dentures out for a week or two. If the burning sensation continues or is worse after the dentures have been left out for two weeks, it would be fair to assume that the condition is due to a nerve trunk or nerve center disorder that has nothing to do with the denture fitting.

In this case if the discomfort is severe or annoying enough to justify a paralysis of the sensory nerve sensation of the region, you may be justified in resorting to an alcohol injection into the nerve trunk or the removal of a section of the nerve.

If, by leaving the dentures out, you can demonstrate that the irritation and discomfort are caused by the wearing of the dentures, test with finger pressure or a large round burnisher to locate the anterior palatine and the mental foramina. If the pressure on these nerves produces this burning sensation, cut out a generous relief over these areas. If sensation persists, it is possibly due to negative pressure or suction in the region of the anterior palatine canal. To check this, fill in relief with softened wax and let the patient wear it so for a few days, cautioning her to avoid disturbing the wax with hot water or brush. If this wax correction of pressure provides relief it is a simple matter to transfer it into permanent form. —V. C. Smedley

DRY SOCKET

Q.—Recently* there was given in this department an answer to G. W. O. on the treatment of dry sockets. The single application of a sedative cement greatly interested me. I can usually stop the pain, but require four or five treatments to do so.

Would you give me the name or ingredients of the cement? Also, do you use more than one cone for multirooted teeth? Is there any definite treatment before placing the cone?—H. D. S.

A.—This sedative cement is manufactured for and distributed by the Dental Specialty Company, Denver. Its ingredients have been published and are oxide of zinc, bismuth subnitrate, eugenic acid, iodine, and thymol.

It is seldom, I think, that a dry socket ensues in more than one root of a multirooted tooth. Care should be taken not to place a single mix of the cement into divergent canals or into any cavity that is larger within than at the orifice, as it gets hard enough to be difficult to remove from interlocking undercuts.

Remove any pus or débris that may be present in the socket by washing it out with any mild antiseptic—salt water, chlorozene, S.T. 37, or hydrogen peroxide. I like peroxide where the orifice is wide open so that the effervescence can escape readily, carrying infection and débris out with it.

After this is done, bathe the walls of the socket with the cement liquid and, without pressure, insert the cone-shaped cotton pack.

To avoid locking the cement into divergent canals, a cone of cotton moistened slightly with the liquid may be placed in one or more canals. This can then be sealed in with a cement cone in the remaining canal.—V. C. SMEDLEY

*ORAL HYGIENE, August, 1933, p. 1212.

FLUX FOR STEEL

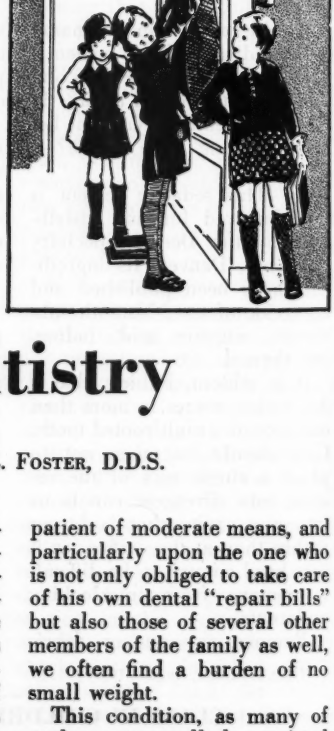
Q.—What flux should I use in the soldering, with gold solder, of the new materials of the stainless steel class?—W. W. McE.

A.—The metallurgist whom I consulted tells me the flux to use to clear the steel so that it will take a gold solder is equal parts of boric acid and potassium fluoride mixed to a thin paste with a 50 per cent solution of hydrochloric acid.—V. C. SMEDLEY

CLASS IN CHILDREN'S DENTISTRY

Beginning November 13, Dr. Claude W. Bierman, Medical Arts Building, Minneapolis, will conduct the third of a series of classes, in children's dentistry, at Rochester, New York. Because of the large amount of operative and laboratory work to be done, membership in the class is limited. Inquiries about the course may be addressed either to Doctor Bierman, or to ORAL HYGIENE, 1005 Liberty Ave., Pittsburgh, Pa.

Unfortunately many youngsters have, through no fault of their own, suffered irreparable damage.



An N. R. A. Code *for* Dentistry

By Robert L. Foster, D.D.S.

With the dawn of recovery from an unprecedented economic crisis we of the dental profession are beginning to see the effects of dental neglect as patients return for examinations after several years of absence. The saddest pictures are seen in the mouths of children. Unfortunately many youngsters have, through no fault of their own, suffered irreparable damage.

If we consider the financial strain upon the budget of the patient of moderate means, and particularly upon the one who is not only obliged to take care of his own dental "repair bills" but also those of several other members of the family as well, we often find a burden of no small weight.

This condition, as many of us know too well, has existed for some time past. Because of it, millions of people have neglected the necessary care of their own and their children's teeth; and millions of mouths have been wrecked.

"I realize that I am not offering anything startlingly new but it is an idea which I believe has been or should have been put into practice for the past several years. Particularly at this time, and for many months to come, will it be appropriate in its application as a method in preventing the total loss of millions of teeth, thereby playing an important part in the recovery program under the National Recovery Act."

●

While some of the cases are hopeless, fortunately many of them are not entirely beyond repair. With proper and immediate treatment the teeth may be saved. However, in outlining our program of repair and establishing satisfactory financial relations with the one who is expected to pay for the work, let us be quite sure we understand and appreciate his situation before rendering our verdict on the case.

To be too hasty in stating the number of gold inlays or even amalgam restorations and the total fee necessary for our work may cause too great a shock and prevent immediate action in a case that needs emergency treatment.

Where there are several teeth nearly destroyed by the ravages of decay in the mouth of a patient of moderate circumstances I not only believe it is better dentistry but also that it is the duty of every honest dentist to put forth all his effort to save every one of those teeth as quickly as possible, by temporary means if necessary and take no chances of discouraging an already embarrassed patient by trying to see how many ten dollar inlays he can be sold first. The opportunity to sell the inlays may return but the opportunity for saving a tooth should not be trifled with.

By cleaning out the decay, sterilizing the dentine, and sealing the cavity with cement, we are able to save the life of five

to ten times as many teeth for at least a year compared with the time and fee necessary for saving one tooth with a properly made average size gold inlay.

In recommending this type of restoration in such cases let us be sure we are using the cement best suited to the case and that we are using it properly. There are many brands and different compositions of cements each intended for various purposes. Choose the proper material and follow the manufacturer's directions for manipulating it. This work, although intended for temporary service, deserves as much care as any other work in dentistry.

The technique for making a good mix of dental cement and properly restoring lost tooth structure with that material is not difficult; yet, like the techniques for other plastic materials, it seldom receives any serious study and is often abused and misused.

When the emergency work has been done and paid for, we are ready to take our time in arranging a program of permanent reconstruction which will accommodate the demands of both the operator's and patient's economic position.

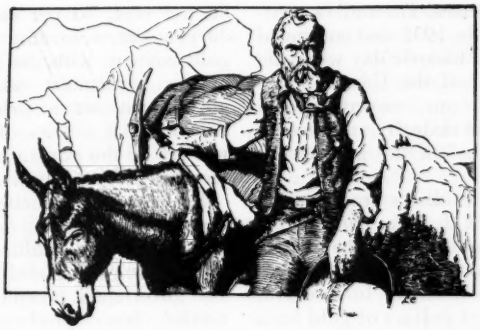
To the sincere and right thinking patient of restricted finances this plan is not only appealing but he is also favorably impressed by our efforts in trying to help him out of a deplorable situation with a plan that will work no hardship on anyone.

I realize that I am not offering anything startlingly new, but it is an idea which I believe has been or should have been put into practice for the past several years. Particularly at this time, and for many months to come, will it be appropriate in its application as a method in preventing the total loss of millions of teeth, thereby playing an important part in the recovery program under the National Recovery Act.

1706 East Washington Street
Indianapolis, Indiana

LOOK OUT!

A middle-aged woman representing herself as an agent for a company located in Kansas City, Missouri, has been selling operating coats. Investigation has revealed that the company represented does not exist. When last heard of the woman was working in the vicinity of Mobile, Alabama.



Gold Fever

THE mere mention of the word GOLD has caused man to break all the Ten Commandments and the laws of all nations, and the quest of the metal has caused human stampedes and the fall of empires.

The recent rise in the price of gold has created a disturbance in the dental profession never before equalled.

The optimistic hopes of the old bearded sourdough were more than realized when the price of gold to the arts and crafts advanced 50 per cent.

* * *

This heavy, rich, greasy, glittering metal has caused the heads of practically all the nations of the world grave concern ever since the start of the World War.

With the exception of the United States, every nation which used gold as its standard for currency "went off the gold standard" during the war, and it was not until 1924 that we find all these nations back on the gold standard.

Until three years ago, the United States led in the production of gold. Then the picture changed and Canada stepped in as the second largest gold producing country in the world, being only exceeded by South Africa.

This event, and the startling announcement that came over the radio on that Sunday evening in September, 1931, that England had again gone off the gold standard, caused the gold producers in this country to be alert. Unfortunately our government, in the minds of some, did not take sufficient precautionary measures. For a few months gold flowed into the

United States. The outflow started early in 1932 and continued until that historic day when the President of the United States declared our country had joined the majority and that we also were "off the gold standard."

The President's proclamation carried with it a ban on exporting gold and a penalty for hoarding the metal. Every effort was made to lure several billions of dollars of gold back into the vaults of the United States mints, but with little success.

* * *

Gold-wise speculators clutched their supply with grasping fingers. They knew the gold export ban would be lifted soon, as it restricted foreign trade, and that the price of gold would rise. Gold in England had been selling to the arts and crafts for $30.61 an ounce, a rise of 50 per cent.

The President as part of his program to stimulate business lifted the export ban on August 28. The release did not apply to the government, as not one ounce was sold by the United States mints. They were buying gold.

The arts and crafts were now entirely dependent on the floating stock and all the foreign countries were clamoring for the yellow metal. The government for the first week did not set a price and dental dealers, dentists, jewelers, etc., were all greatly confused. The price was raised to conform to the market price in England, 50 per cent, 40 per cent, and 30 per cent, according to pure gold content, with the promise of an adjustment when the government set a price. On September 8, a price of $29.64 was set by the government and the new price is given daily.

Refiners and smelters just about stopped doing business. The daily price published by the government varied greatly. The government bought what it needed from producers and sold the excess to the arts and trades at the price set for that day. The price on September 18 was $31.44. Dental scrap is purchased by dental dealers and refiners very cautiously at about 30 per cent under the price quoted for pure gold. Many refiners are not buying more than their daily needs and are buying from each other. New price lists are being issued by the various dental gold manufacturers, subject to change.

* * *

The restorative end of dentistry is built around gold. The average dentist is a victim of its lure. How carefully does he collect his scrap and make plans for pleasure trips for his family with the money derived from the sale of his hoard!

The added expense of such an important item at this time seems a burden. But let us be calm and take a typical case.

A patient has a lower first molar missing. It is decided to restore this molar by a removable bridge—one tooth and two

clasps. The agreed price to the patient is $20 a unit, or $60. The dentist takes the impression and the bite. He then can send it to the laboratory or do the work himself. If he does the work himself he does so to save money, so we will send this case to the laboratory as the dentist's outlay is the greater. The laboratories in most sections of the country in their new price lists agree to do this work for about $16, materials furnished. The ratio of expense to the dentist, excluding overhead, is about one fourth. If a deposit on the work is secured or the work done for cash, is this a sufficient profit? The average gold content of such a case is approximately 4 dwt. A knowledge of the cost of the gold you use and simple arithmetic will show you the additional cost, due to the prevailing price of gold.

Would it be politic for the dental profession to reflect this entire rise in the price of gold in the fee for finished work? Is there not a danger of the public delving too deeply into *material* costs of dental work which would reflect badly upon everyone concerned. The average patient allows little or nothing for overhead, collections, etc., in his price computation.

The problem will have to be solved by each individual dentist who should remember the national slogan, "We Do Our Part." The part you do will help to determine whether or not the dental profession retains or loses the good will of the public.

We are all for the NRA, the success of which will determine the NDR—National Dental Recovery.—W. EARLE CRAIG

Oral Hygiene's New Address:

1005 LIBERTY AVENUE,

PITTSBURGH, PA.

THE DENTIST'S POSITION UNDER

The Blue Eagle

DENTISTS throughout the United States are earnest in their desire to cooperate with the President in his Recovery Program. There is no question of their sincerity when they write the National Recovery Administration (as they are doing) setting forth "the evils confronting the dental profession" and asking that a code be formulated by the government to correct these evils.

The task confronting the correspondence division of the NIRA is an enormous one and requires many persons, all of whom can not be authorities. The dentist writes, asks several questions, mentions "the many evils facing our profession." The letters are received in Washington, passed on to one of these many clerks. The clerk interprets the questions, quotes the law, and gives his own opinion. The result—well—one hundred letters, maybe two hundred different interpretations, which are most confusing. Some of these letters reach the public press and add to the confusion.

All the codes in industry were formulated and submitted to the government by accredited representatives of those industries. All publicity concerning the code for each industry was given out by its national organization.

The act is known as the National *Industrial* Recovery Act and the professions are *not* covered by the law. Should the profession be covered by the act at a later date, a code will be formulated by the American Dental Association and submitted to the government for approval.

The government does not write a code for any industry unless it is unorganized. In case the industry is organized, the already existing group is generally the only one considered.

Dentistry is well organized. The men holding office in the A.D.A. are alert. They, too, are practicing dentists and are aware of the evils confronting the profession. They are the proper persons to secure interpretations of the law and to issue statements to the press.

The committee handling matters of this kind in the A.D.A. is the Committee on Legislation and Correllation. The chairman is Dr. Homer C. Brown, of Columbus, Ohio, who has

made many trips to Washington in the interest of the profession.

The effect on dentistry of this act must be considered from two angles:

1. The dentist as a professional man is not subject to the code.

2. As an employer:

Dr. Brown in recent correspondence issued the following statement:

"Regardless of all previous statements and conflicting interpretations, my latest information prompts the following conclusions which were approved over the 'phone by C. Sterry Long, Chief of the Interpretation Section, Blue Eagle Division of the NRA, Washington, as to interpretation and phraseology:

"(1) That a professional assistant, employed in his professional capacity by a dentist, is exempt from the maximum hours, but not from the minimum wage provision of the President's Reemployment Agreement. Employed dentists, dental technicians, dental hygienists, anesthetists, radiologists, trained nurses and assistants, are included in this professional group.

"(2) All *non-technical* assistants, in cities of more than 2,500 population, are restricted to 40 hours per week. In cities of 2,500 to 250,000 the minimum pay is $14 per week. In cities from 250,000 to 500,000, $14.50 per week, and in cities of more than 500,000 the minimum pay is $15 per week. In cities of less than 2,500 the hours are not limited but the pay scale is to be advanced 20 per cent, over previous scale, if this does not exceed $12 per week.

"Explanatory: It is my opinion that a *reasonable interpretation* of the foregoing, as it applies to a dentist with one employee, who renders technical professional assistance at the chair, and also does the necessary clerical work connected with the office is that the employee may be classified as a technical professional assistant."

Furthermore it is not the purpose of this act to create unemployment and if a dentist feels he cannot afford to increase wages he can under Article 14 of the President's Reemployment Agreement receive special permission to subscribe provisionally to the employers' code.

A dentist who employs no one can subject himself to the requirements of the President's Reemployment Agreement if he so desires and thus obtain the right to display the Blue Eagle.* A dentist without employees obligates himself by signing the agreement to hire in accordance with the terms of the agreement such employees, if any, as he may engage during the life of the agreement; that is, until December 31, 1933.

*National Recovery Administration. Interpretation of the President's Agreement, Article 14 (concerning owners of stores without employees).

LAFFODONTIA

If you have a story that appeals to you as funny, send it in to the editor. He MAY *print it—but he won't send it back.*

"You ought to be proud to be the father of such a splendid family," said the principal of the boarding school to her visitor.

"What on earth—large family?" glared the father.

"Yes, indeed. Your daughter has had eleven of her brothers here, this term, to take her out. She expects another tomorrow."

"I never send a subordinate off on a fool's errand."

"No, it's so much better to go yourself."

Two Irishmen, with a grievance against their landlord, decided to settle it man to man and laid for him one night with their shillalahs. They expected him to pass their hiding place at nine. At eleven he had not made his appearance.

"Now what the divvle," said one of them, "can be kapin' 'im?"

"Do yez suppose, Pat," said the other, in a voice of sympathy and solicitude, "that anything can have happened to the poor fella?"

"It seems to me, my dear," remarked the young husband, "that there is something wrong with this cake."

"That," the bride derided triumphantly, "shows how much you know about it. The cook book says it is perfectly delicious."

Phil: "I need five dollars to pay for my room this week, and I have only four."

Bill: "Well, pawn the four dollars for three, and sell the pawn-ticket for two dollars."

Book Agent to Farmer: "You ought to buy an encyclopedia, now that your boy is going to school."

Farmer: "Not on your life! Let him walk, the same as I did."

A Pullman porter was thrown from his car when the train was derailed, and flew ten feet through the air before he hit head first against a concrete post. He lay in a daze rubbing his head, when the conductor came running up.

"Great Scot, man," cried the conductor, "aren't you killed?"

"No," said the porter, getting to his feet, "dat concrete post musta broke ma fall."

The Scotchman had fallen into the well and, while swimming around in it, called to his wife. She came running to him and asked, "Shall I call the servants from the field, that they may pull you out?"

"What time is it?" inquired he.

"Eleven-thirty," said the wife.

"Well, never mind," said he, "I'll swim around till dinner time."

As soon as the patient who had been bitten by a mad dog learned that the doctor pronounced him fatally stricken with hydrophobia, he asked for a pencil and a sheet of paper.

After he had been busy for some time, the nurse said: "Hadn't you better have a lawyer assist you in making your will?"

"Oh, no," was the answer. "I'm not making my will. I'm making a list of the people I want to bite."